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# Editor's Column: Women & ADHD on Front Street

## Adriane M. F. Sanders

Inhale. Exhale. I have actively tried *not* to write this particular column. I have come up with various alternative topics, and yet, when I sat down to put words on the page, my hands and heart took over. In the summer of 2022, in the last year of my 30s, I was officially swept into the phenomenon that is late, female, ADHD diagnosis. Inhale. Exhale. I have said these words out loud to exactly 10 people: 3 of which were mental health care professionals, 1 of which was one of my graduating grad students who unknowingly contributed to me seeking the diagnosis, 0 of which are family members to whom I'm not married.

ADHD has been part of the DSM in some version since 1968: introduced as "hyperkinetic reaction of childhood," followed by attention-deficit disorder (ADD) with or without hyperactivity in 1980, and then attention-deficit/hyperactivity disorder (ADHD) in 1987, with the inclusion of ADHD subtypes of predominantly inattentive, predominantly hyperactive-impulsive, and combined (Epstein & Loren, 2013). However, the disorder has been primarily studied and diagnosed in young white men, largely overlooking "female presentation in both research and clinical settings" (Hearing, 2023; Hinshaw et al., 2022). Research and therapeutic and clinical training have considerable catching up to do in order to better prepare professionals in understanding and recognizing female presentations of ADHD (kudos to the recent calls for a "paradigm shift" toward including more diverse and historically underrepresented groups in all clinical research and practice, e.g., Jaffee, 2022). However, women are not waiting for the field to catch up: "in 2018, the CDC reported an increase of 344% in women seeking medication for ADHD, while Google searches in the U.S. related to ADHD in women more than doubled between March 2021 and March 2022" (Anderson et al., 2018; Hearing, 2023).

Women tend to be diagnosed later in life, with the average age between 36 to 38 years old (Quinn, as cited in McCarthy, 2022). Other commonalities among women with ADHD is that they often present with the inattentive type and have adapted (often extreme and/or elaborate) coping strategies, many of which "mask" their symptoms, as a means to overcome struggles and adapt to living years without a diagnosis (Hearing, 2023). In other words, ADHD in girls and women often presents differently than in boys and men (Ruskin, 2022). One possible explanation for women being mis- or undiagnosed with ADHD is that it's simply easier to notice (read: more disruptive) in young boys. Alternative theories suggest (a) the potential for "adult-onset" ADHD, particularly for women (i.e., the symptoms do not show up until later in life); (b) a "female protective effect" in which girls and women must encounter more stressors for underlying ADHD symptoms to emerge; and (c) hormonal fluctuations throughout the lifespan are to blame (e.g., the estrogen-dopamine relationship; McCarthy, 2022; OHSU Center for Women's Health, n.d.; Young et al., 2020).

Ever since this diagnosis, I have felt mostly validated but also an overwhelming urge to poke holes in the diagnosis and explain it away. As I've been exploring this new layer of identity and community, I find that both the personal and societal urge to dismiss this type of diagnosis, particularly for adult women, is pretty typical. Perhaps you are also questioning some experiences you're having and wondering if it could be ADHD, or maybe a friend has an old or new ADHD diagnosis. The following is a list of real statements that are often said (by the individual, well-meaning friends/family, and/or health practitioners) when trying to reconcile these patterns of thinking, feeling, behaving with an outdated understanding of

**President's Column: Updates and Thank You**

**Mo Wang**

This is the last column for me as the SIOP president and I have some great updates to share!

First, SIOP has made important progress in helping shape national/federal level policies on AI-based assessment. During my presidential term, we have worked hard to engage members of the EEOC to address the topic of AI in hiring. In an EEOC hearing held on January 31, **Nancy Tippins** testified as a SIOP representative on "Navigating Employment Discrimination in AI and Automated Systems: A New Civil Rights Frontier." She did a really great job of advocating for SIOP, I-O psychology in general, and the effective use of AI for hiring. At this hearing, EEOC Commissioner Sonderling also made following remarks that are very encouraging for I-O psychologists:

> I have been spending a lot of time with I-Os and have really been trying to make sure that everyone involved is aware of your very important practice and all the work you are doing in this area. And I often said, at the end of the day, who is going to do this testing, who can actually assist employers, lawyers, auditors with the actual standards and putting pen to paper, and I believe that largely is going to fall on I-Os.

You can find the recording of this public hearing at https://www.youtube.com/watch?v=rfMRLestj6s.

Second and relatedly, SIOP recently released recommendations for artificial intelligence-based assessments: Considerations and Recommendations for the Validation and Use of AI-Based Assessments for Employee Selection. This document supplements SIOP's statement on the use of AI for hiring, which was created by the SIOP Task Force on AI-Based Personnel Assessment and Prediction in spring 2022. The recommendations discuss the unique challenges and considerations that arise in the development, evaluation, use, and interpretation of AI-based assessments. These recommendations will be useful for anyone who is currently using or is planning to use AI-based assessments in their organization.  We thank Task Force Chair **Chris Nye** and Task Force members **Leaetta Hough, Kisha Jones, Richard Landers, Toni Locklear, William Macey, Fred Oswald, Dan Putka, Ann Marie Ryan, Ryne Sherman**, and Nancy Tippins, for generating these thoughtful recommendations.

Third, the SIOP Executive Board (EB) has been working hard to improve the security and stability of SIOP finances. SIOP is always trying to do more and better for our members. We believe our membership community has myriad needs on which we should deliver. We aim to be the premier organization advancing science and practice that transforms work and improves worker well-being around the world while also serving as the welcoming, professional home base for the I-O psychology community. However, it is also important to realize that SIOP is a business. It has expenses. It wants to make improvements. It needs to be a fair and supportive employer (it would be particularly troubling for us as I-Os not to pay attention to this one). It is subject to the same market and economic forces like inflation and supply chain pressure and other issues. And so, to deliver a desirable SIOP membership experience, there are real and legitimate costs that must be covered.

Under the leadership of Financial Officer/Secretary **Eric Heggestad**, the EB worked together to develop a new and more sensible framework for conceptualizing and organizing SIOP's finances. Specifically, we looked at all of SIOP's methods of earning revenue and sources of expense and consolidated those into a few "buckets." Critically, we considered expenses related to staff resources allocated toward each of the

buckets, which, as you can imagine, can dramatically impact the bottom line for each bucket. We also engaged in high-level discussion about principles for how SIOP should be funded, financial diversification, the importance of aiming for better than break-even each year to invest in strategic reserves, and the cadence by which funding decisions should be made. Applying this new framework, we found that we were running a notable deficit each in the past 5 years in the bucket of Membership Services, where our membership dues revenue is insufficient to fund our membership services function. These deficits are not sustainable. Although we remain mindful and vigilant about cost containment where it can be done without negatively impacting service quality, we need to also increase the amount of revenue earned through dues collection. To ensure continued member service quality and, importantly, to position SIOP in a way that ensures this function is funded responsibly into the future (instead of perennially playing catch-up), our group agreed that we need to address this deficit primarily with a dues increase. Moving forward, we have committed as a board to evaluate dues annually during our budget process, in the same way we think about pricing for every other revenue item. We will then be able to think about how much it will cost to deliver membership services and whether we can do so through expense mindfulness alone or whether a dues increase is warranted.

Finally, as our 2023 SIOP Annual Conference approaches, I would like to give a special thank you to Conference Chair **Winny Shen** and Program Chair **Enrica Ruggs** and the committees that assisted them during their tenure. Their long hours organizing such a robust conference program have really paid off, and we are looking forward to attendance numbers comparable to the prepandemic era. I would also like to thank the SIOP staff team for all of their behind-the-scenes support. It is amazing how much the staff has been able to accomplish this year. Let's also not forget the in-person and virtual SIOP member volunteers who stepped forward to facilitate and keep things moving smoothly. Your willingness to devote time is very much appreciated. And finally, thank you to our sponsors. We really need you. Your financial support helped round out the conference offerings.

All the hands that came together to pull off the amazing SIOP Annual Conference are truly remarkable. This is exactly what allows SIOP to go beyond and continue its growth and influence. With this outstanding stakeholder engagement, SIOP is promoting our brand and delivering our content to other parts of the world, taking a leading role in shaping the future of working and organizing, and generating signature educational content to help the next generation of I-O psychologists to grow. Although the 1-year presidential term has flown by very quickly, I have loved every minute of serving our members and stewarding our society's mission. Thank you for this opportunity and I look forward to supporting my successor, **Tara Behrend,** for her presidential term!

ADHD, particularly when these patterns are presenting in women (see the resources list at the end for Tracy Otsuka's own compiled list).

It's not ADHD…:

1. *Everyone's easily distracted at times.*
   a. Sure! However, I have come to learn that not everyone needs an elaborate, exhausting daily system to remember things and tasks that range from very basic to very big/important.
2. *It's just motherhood/parenthood.*
   a. It is hard to refute this one. Depending on the age of your child(ren), you may not be able to finish a complete thought or sentence without being interrupted. However, if you too find yourself asking "Is it ADHD or is it just motherhood?," you may be surprised to learn that ADHD is linked with our hormones (McCarthy, 2022). You may *not* be surprised to learn that one of the many many things to change with motherhood are your hormones. And like other types of psychological disorders and differences, major life changes can exacerbate even the most well-managed (or well-masked) symptoms. Motherhood is nothing if not MAJOR.
3. *It's life in the 21st century with all its technology and social media.*
   a. Though these dopamine-rich companions of daily life certainly don't make sustained focus any easier, if this is all it took for a diagnosis, then we'd have a difficult time explaining all the other symptoms and behaviors that come along within the constellation of ADHD.
4. *I tricked the diagnosing mental health care provider.* (This is a personal contribution to the list.)
   a. Setting aside the arrogance of this one, I *do* know lots of things about psychology, and I *can* be very convincing. However, I have little first-hand knowledge about clinical assessments (despite all the mental health talk around this column, I was I-O from the beginning!). There are several embedded deception scales across the self-report, peer-report, behavioral, and observational-based assessments; and I was evaluated/diagnosed by a vetted, established mental health professional. I'm good, but I don't think I'm good enough to *accidentally* fake a disorder–I can't even lie on my insurance company's wellness checks.
5. *No one in my family has ADHD.*
   a. Is it possible that no one in your family has an ADHD *diagnosis* (nor, perhaps, any other mental health diagnosis)? We know about the reduced likelihood of older generations to seek mental health support (APA, 2018).
6. *I was a straight A student in K–12 and very involved in and out of class—an overachiever. Doesn't this show up in early childhood? Don't children with ADHD have bad grades?*
   a. This one derives from limited and outdated ADHD stereotypes (Mowlem et al., 2019). For example, I loved school and my teachers all the way into grad school, so much so that I wanted to stay in it for my career. Researchers (and diagnosed individuals) have known for some time that there actually isn't a deficit of attention in this condition. For activities and tasks that are engaging and interesting to the individual, they can easily persist and perform. Despite these very pro-school behaviors, there were potential indicators that were overlooked because I was a girl (Young et al., 2020). I received multiple report cards noting endearing characteristics such as "talks excessively" and "worrywart," but these were just seen as girl behavior.
7. (Related to above) *Don't children with ADHD have behavioral problems in class?*
   a. ADHD behaviors can show up differently across gender given our different gender norms and expectations. For example, young boys may keep getting up in class in a way that is considered distracting or problematic by adults. Young girls may get up so they are the first volunteer to help the teacher pass out materials. Both examples demonstrate a potential impulse-control or hyperactivity issue common in ADHD, but one is considered socially acceptable, and even desirable, particularly for young girls who are taught to be helpful and giving at a young age.

8.  *I can sit still/I am not hyperactive.*
    a.  Get this–the hyperactivity can be cognitive (PsychCentral, 2022)! For example, I was shocked to learn that not everyone has an endless stream of thought from the moment they wake up until the time they fall asleep. Outside the classroom, the symptom of impulsivity can manifest in risk taking behaviors that are often brushed off as typical teenage "stuff" (Young et al., 2020). However, these may eventually turn into socially acceptable but maladaptive adult behavior (e.g., alcohol abuse).
9.  *I earned a PhD! Or achieved some other demonstrable measure of adult success.*
    a.  Individuals with ADHD can have significant achievement/success, but consider my case as an example:
        i.   Exhibit A: Grad school is also when I was diagnosed with generalized anxiety (an incredibly common mis- and co-diagnosis with ADHD; Quinn & Madhoo, 2014);
        ii.  Exhibit B: It took me 8, *productive and fruitful*, years to finish (so many fun new opportunities!), and
        iii. Exhibit C: Potentially the only reason I finished at that point was because I had a successful run on the job market that provided an aggressive and finite timeline.
10. *I am objectively successful.*
    a.  Many individuals feel that any mental health diagnosis diminishes their value or worth in some way and society helps reinforce this stigma (much akin to the othering that occurs with bodies of every size). This "lesser" perception may be particularly true for disorders that impact learning and performance. Given this pervasive internalized messaging, it's no wonder we may find ourselves assuming that ADHD and success are incompatible.

Given the stereotypes, stigma, and outdated knowledge about ADHD, individuals who are struggling with this symptomology may feel caught in the middle of a (presently) losing battle of optics: work to acquire/use this label despite the stigma _or_ skirt a diagnosis in favor of trying to blend in with neurotypical experiences of occasional, mild episodic sensations of struggle, overwhelm, overstimulation, short-temper, impatience, distraction, hyperfocus—only these can be everyday experiences for neurodivergent individuals. As is often the case when stigma is involved, there is an undercurrent of fear here too–fear of someone questioning our competence or using a diagnosis against us (only we can do that to ourselves, right?). The thought of someone thinking they "know" something about me without actually *knowing* me is unsettling. I straddled these battle lines and ultimately inched one toe further into the "label it" camp.[1] Despite immediately seeking an ADHD assessment (once it was on my radar), I too tried on each of the above statements and continued even after the diagnosis.

## A Call to Action

But what if there was a different way? What if there was better understanding and easily accessible knowledge available as part of employee health, well-being, and work/life harmony so that every individual didn't have to reinvent the wheel by piecing together social media videos and podcasts? What if we didn't try to minimize and dismiss as though everyone has the same struggles and provided established pathways for neurodivergent employee advocacy and awareness? What if we skipped a step in this familiar chain of events and went straight to including voices of all gender identities and people of color for whom the uniquely intersectional challenges compound the neurodivergent experience at work? These questions go beyond ADHD and other forms of neurodivergence. These ideas sound like the work of diversity, equity, inclusion, and accessibility. **This is the work of I-Os.** To achieve these endeavors, it is our (I-O) responsibility to understand and recognize the need for comprehensive employee wellbeing. To do so, we must take an interdisciplinary, occupational health approach by learning from

and partnering with clinical mental health professionals, among others. Such a partnership ensures we all stay in our lanes professionally and ethically to develop a new, informed framework for employee health and, in turn, organizational effectiveness.

In addition to this call to action, my hope in sharing these experiences is that (a) if you recognize yourself in any of this, you'll feel a little less isolated, and (b) if you have diminished an ADHD diagnosis (yours or otherwise) you'll join me in taking a step toward honoring and centering this identity right next to the ones we more readily accept.[2] Let's put adult experiences of ADHD and how it impacts our work and nonwork domains out on front street (this issue's column, *The Bridge* is ahead of the game). For me, having the lens of ADHD to corral these seemingly unrelated experiences, "quirks," and difficulties is continually affirming and empowering. It may be for you too. There are many in our SIOP and work communities having similar experiences across gender identities, across forms of neurodivergence and other invisible health conditions. Let's I-O the hell outta this!

Stay tuned for next issue where I'll do a deep dive on my inner child! JUST KIDDING.

Resources:
- Tracy Otsuka's podcast episodes that clicked and got ADHD on my radar…
  - ADHD for Smart Ass Women, Episode 178: No, it's not ADHD…
  - ADHD for Smart Ass Women, Episode 40: How to prepare to meet with your ADHD doctor
- The podcast I keep coming back to…
  - Women & ADHD: Interviews with Katy Weber
  - Episode 108 specifically: Robin Zheng: Performance anxiety, academia, & pressure to succeed

*Special thanks to the 11th person I told, a dear colleague (and I-Oer) who reviewed an earlier draft of this column and offered thoughtful feedback and encouragement.*

**Notes**

[1] As evidenced by running this column. However, I continue to go back and forth on this decision. Even as I'm finalizing it, I think, "could I just delete this and not have a Spring column?"
[2] Still unsure of sending this. It's a very personal topic for many and I have agonized over getting the right mix of citations, striking the right tone, remaining inclusive while trying to highlight a very individualized experience…

**References**

American Psychological Association [APA]. (2018, October). *Stress in America: Generation Z.* APA. https://www.apa.org/news/press/releases/stress/2018/stress-gen-z.pdf

Anderson K. N., Ailes E. C., Danielson M., Lind, J. N., Farr, S. L., Broussard, C. S., Tinker, S. C. (2018). Attention-Deficit/Hyperactivity Disorder medication prescription claims among privately insured women aged 15–44 years — United States, 2003–2015. *MMWR: Morbidity & Mortality Weekly Report*, *67*, 66–70. http://dx.doi.org/10.15585/mmwr.mm6702a3

Epstein, J. N., & Loren, R. E. A. (2013). Changes in the definition of ADHD in DSM-5: Subtle but important. *Neuropsychiatry (London)*, *3*(5), 455-458. doi: 10.2217/npy.13.59

Hearing, A. (2023, January 1). The hidden condition that could be crippling the women in your work-force. *Fortune.* https://fortune.com/well/2023/01/01/adhd-the-hidden-condition-that-could-be-crippling-the-women-in-your-workforce/

Hinshaw, S. P., Nguyen, P. T., O'Grady, S. M., Rosenthal, E. A. (2022). Annual research review: Attention-deficit/hyperactivity disorder in girls and women: Underrepresentation, longitudinal processes, and key directions. *Journal of Child Psychology & Psychiatry*, *63*(4), 484-496. https://doi.org/10.1111/jcpp.13480

Jaffee, S. R. (2022). Editorial: The times they are a-changin': Paradigm shifts in child and adolescent psychology and psychiatry. *Journal of Child Psychology & Psychiatry*, *63*(4), 357-359. https://doi.org/10.1111/jcpp.13604

McCarthy, L. F. (2022, November 17). Women, hormones, and ADHD. *ADDitude.* https://www.additudemag.com/women-hormones-and-adhd/

Mowlem, F., Agnew-Blais, J., Taylor, E., & Asherson, P. (2019). Do different factors influence whether girls versus boys meet ADHD diagnostic criteria? Sex differences among children with high ADHD symptoms. *Psychiatry Research*, *272*, 765–73. https://doi.org/10.1016/j.psychres.2018.12.128.

OHSU Center for Women's Health. (n.d.). Women and ADHD: What's the hype? *Oregon Health & Science University's Center for Women's Health.* https://www.ohsu.edu/womens-health/women-and-adhd-whats-hype

PsychCentral. (2022, November 1). What's the connection between ADHD and racing thoughts? *PsychCentral.* https://psychcentral.com/adhd/racing-thoughts-adhd#:~:text=Racing%20thoughts%20in%20ADHD%20can,or%20a%20couple%20of%20days.

Quinn, P. O., & Madhoo, M. (2014, June 15). A review of attention-deficit/hyperactivity disorder in women and girls: Uncovering this hidden diagnosis. *Psychiatrist.com* https://www.psychiatrist.com/pcc/neurodevelopmental/adhd/review-attention-deficit-hyperactivity-disorder-women/)

Ruskin, K. (2022, September 12). For some women with ADHD, TikTok is the first place they felt heard. *TIME.* https://time.com/6211695/adhd-tiktok-women/

Young, S., Adamo, N., Ásgeirsdóttir, B.B., Braney, P., Beckett, M., Colley, W., Cubbin, S.., Deeley, Q., Farrag, E., Gudjonsson, G.., Hill, P., Hollingdale, J., Kilic, O., Lloyd, T., Mason, P., Paliokosta, E., Perecherla, S., Sedgwick, J.,…Woodhouse, E. (2020). Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/hyperactivity disorder in girls and women. *BMC Psychiatry, 20*, Article 404. https://doi.org/10.1186/s12888-020-02707-9

**Max. Classroom Capacity: ChatGPT Shakes Up I-O Psych Education…**

**Loren J. Naidoo**
**California State University, Northridge**

Dear readers,

On January 23, 2023, Microsoft announced that they were investing in OpenAI, the inventors of ChatGPT (reportedly to the tune of $10 billion USD). In the weeks prior to this announcement, ChatGPT had already received considerable media coverage, including in outlets such as the *New York Times*, *Bloomberg*, *The Wall Street Journal*, and *The Atlantic*. ChatGPT provides an interface in which you can ask an AI chatbot a question or assign it a task. In most cases, you will receive a relevant response from it.[1] I firmly believe that it is important for educators to understand what ChatGPT can and cannot do, both because it is a tool that is already being used by our students, which has important implications for how we conceive of, develop, and administer assessments of learning, and because it is potentially a tool that we may all use to become better or more efficient students and educators. In my prior Max Classroom Capacity columns on this topic (on robograding & robowriting), I was fairly skeptical of AI. Although I am not lighting my torch and sharpening my pitchfork yet, ChatGPT has changed my perspective on AI.

Caveats: Below I describe my attempts to understand how ChatGPT may be used in psychology and management classes, and provide some conclusions and ideas for moving forward. Please note that my views are based on a considerable amount of time spent testing ChatGPT with materials from my own classes. However, they are NOT the result of carefully controlled, systematic, and exhaustive peer-reviewed research, nor of in-depth, technical knowledge of the inner mechanics of AI in general or ChatGPT in particular. I tried to use ChatGPT as would a student or instructor and evaluated the results without any particular agenda.[2] I encourage you to replicate and go beyond what I've done with your own materials and come to your own conclusions (which I would love to hear!). Finally, sorry for all of the footnotes, which I nonetheless encourage you to read.[3]

### Still Bad at Writing Research Papers

Back in the January 2022 issue of *TIP*[4] I discussed the likelihood of students using AI to write academic papers by trying out two newly developed apps based on the GPT-3 AI[5] platform. My conclusion at that time was that the two GPT-3-based apps were not very good at writing academic papers, especially research papers. Although ChatGPT looks like an improvement over those earlier apps, most of my critiques still apply. ChatGPT can produce essay content that looks reasonable but is not specific nor reliably accurate. For example, when I asked ChatGPT to generate a paragraph about research on employee recognition, a literature with which I am quite familiar, using APA style citations and a full reference list for the citations, like its predecessors, it generated relevant text with citations that looked plausible but very clearly do not exist. Specifically, four out of the five references it generated were fake. Similarly, when I asked ChatGPT to generate a list of peer reviewed journal articles for the same research topic, it responded: "I'm sorry, I am not able to generate a list of peer-reviewed journal articles as I am not connected to a database. However, here are some examples of peer-reviewed journal articles."

Ignoring its own excuse, ChatGPT then generated the same list of references as before. When I asked it which of the articles in the reference list actually exist, confusingly, it first apologized, said there were inaccuracies in the references that it had provided, and then relisted each reference, stating that each "does exist." When I asked for a web link to one specific article that I knew doesn't exist, it responded:

I apologize, as a language model AI, I don't have the capability to provide you with direct links to journal articles. However, you can access the journal article "ZThe relationship between employee recognition and organizational performance" by J.W. ZLee and Y.J. ZLee,[6] published in the *ZInternational Journal of Human Resource Management* (2001), by searching for the title in a library database or by searching for the journal title "ZInternational Journal of Human Resource Management" and the volume and issue number "12(2)" in an academic search engine such as Google Scholar or JSTOR.

Out of an abundance of caution, I followed the steps, and reconfirmed that the article does not exist.[7]

Next, I stated that this article does not exist and asked why it had generated it. ChatGPT again apologized for the confusion but stuck to its guns, insisting that the article does exist, though it did acknowledge that it doesn't have "the capability to check the existence of every single reference" (or apparently, even just one reference!). In fact, ChatGPT struggled to generate an accurate quote from *any* specific source, especially academic ones. Similarly, when I asked it to identify the author of a specific article published in *The Atlantic*, it identified an author of many *Atlantic* articles, but not of the article in question.

In conclusion, you can't trust ChatGPT on the details! Like its predecessors, ChatGPT is able to produce student writing that superficially *looks* credible but will likely be filled with inaccuracies, especially as more specific details are queried.[8] This is not an indictment of ChatGPT. It is an important limitation that users should be aware of, including our students. One implication is that if you are concerned with students using ChatGPT as a means of cheating on a paper assignment, then (a) use specific prompts such as requiring an evaluation of research articles or other specific sources, and (b) be prepared to check specific references for accuracy because ChatGPT-generated papers will likely contain either references to nonexistent articles or false characterizations of the content of existing articles. More on grading/cheating later.

### Surprisingly Good at Taking Exams

I was curious to see how ChatGPT would perform on an exam that I wrote for a leadership development class. Sometimes I teach this class in fully online asynchronous format with exams administered remotely via canvas, so the possibility that students could use ChatGPT to take this exam is practically relevant. The exam has a set of multiple-choice (MC) questions, followed by a set of short answer/essay (SA/E) questions. I wrote the MC questions from scratch in such a way as to test the application of concepts rather than identification of definitions, and so on. They aren't from a textbook question bank and are not available on the internet, as far as I have been able to determine. Here's an example of the *style* of many of the MC questions (this is not a question from the actual exam):

> One study discussed in Tversky and Kahneman (1981) involved asking people the odds that they would hypothetically pay for a $10 dollar theater ticket after they had either (i) lost their ticket which they had already bought for $10 or (ii) lost a $10 bill. What did they find and how did they explain it?
>
> a. People were **more** likely to pay for a second ticket after losing theirs (vs. after losing a $10 bill) because they were more committed to seeing the play
> b. People were **more** likely to pay for a second ticket after losing theirs (vs. after losing a $10 bill) because they experienced greater psychological dissonance
> c. People were **less** likely to pay after losing their ticket (vs. after losing a $10 bill) because the psychological cost of the play was $20 rather than $10
> d. People were **equally** likely to pay in either scenario because the $10 loss was the same[9]

Similarly, the SA/E questions were meant to require students to apply concepts to hypothetical scenarios. Here's an example of the style of question (also not a question from the actual exam):

> Imagine that you are a high-level HR manager at a large advertising agency. Most of your employees are involved in highly creative, artistic work. The agency is understaffed and experiencing relatively high turnover. Workload is high, deadlines are short, and people are working long hours. You have heard rumors that employees are feeling high levels of stress, and that some of them are even getting burned out. You would like to administer an organizational survey to measure employee stress and burnout, but upper management is resistant to paying for it. They aren't convinced that stress and burnout are worth worrying about. How would you make the case to upper management that stress and burnout are important and should be considered? Please write an e-mail to upper management to convince them.

I submitted every exam question to ChatGPT. I noted the answers it gave to MC questions. I graded the SA/E answers based on the rubrics that I had developed. I also searched through past student SA/E answers to find those that were similar to ChatGPT's as a reliability check.

ChatGPT scored 16/20 on MC questions, which is just above the historical median of 78.5% for this exam over the last ~400 students or so who have taken it. It struggled more on questions that asked about specific ideas or findings from journal articles. Interesting, if asked it will also provide a rationale for its answer. ChatGPT's responses to the SA/E questions were even more impressive, with a total score of 56/60 (93%). ChatGPT's overall exam score was 88%, which put it in the 81st percentile of my students, historically. Yikes!

### What Does All of This Mean?

If these results are reliable[10] and generalize to other, similar exams, then it seems clear that we cannot use such exams and expect that exam performance will reflect student learning unless we implement security measures that prevent students from using ChatGPT (or similar apps) to answer the questions.

Some potential security measures include proctoring software that monitors students and prevents them from using other programs during an exam administered on a computer. However, this might not prevent students from using ChatGPT during the exam on a different electronic device (e.g., their phone). Additionally, there are applications that can detect whether text has been created by AI versus a human. I tried the first free AI detector that I could find. I have no idea how it works or whether others exist that work better. This one seemed to do a fairly good job of distinguishing between AI- and human-authored text, especially with longer responses (see Table 1). With shorter responses, it mistook AI text for human text, *and* vice versa. This makes intuitive sense as recognizable patterns presumably will emerge only with a sufficient amount of data. Telling students that their work will be submitted to an AI-detecting software may discourage students from using AI. However, students could also submit AI-generated content to such detectors and change a few words until their answer doesn't look like AI-generated content anymore (much like "hacking" Turnitin.com[11]). Students could also completely rewrite AI-generated responses. Although rewriting AI-generated content would be difficult to do during a timed exam, students could easily "plagiarize" from AI in this way on writing assignments, which would be very difficult to detect.[12] Also, there is likely to be an arms race between AI writers and AI detectors—I would bet on the AI writers winning. I suppose one might simply revert to using old-school, in-person, paper-and-pencil exams, which, as a solution, has a certain elegance to it. However, as I wrote last quarter, I'd rather spend my energy finding new and better ways to teach than engaging in a war on cheating.

Table 1. Analysis of Writer.com AI Detector

| Author | # Words | Estimated % of human-written content |
|---|---|---|
| AI | 123 | 3% |
| AI | 123 | 0% |
| AI | 39 | 27% |
| AI | 15 | 77% |
| Human | 191 | 100% |
| Human | 85 | 99% |
| Human | 40 | 95% |
| Human | 17 | 52%[13] |

Preventing the use of AI will not only become increasingly difficult from a technological standpoint, it will appear increasingly unreasonable and out-of-touch as all of us become more accustomed to using AI to write (e.g., some form of ChatGPT may eventually be integrated into MS Word and Outlook). If you've ever griped about a student's terrible writing, then, in some sense, ChatGPT is your dream come true! If you let students use it, you may never have to read a terribly written paper again. This is a remarkable innovation![14]

True to my I-O psychology roots, I have mostly talked about implications for assessment validity. However, AI raises much bigger questions as well. If AI can do a credible job of generating grammatically correct, readable, and relevant text in response to a query, then perhaps (a) it is pointless to teach students how to write independently (i.e., *without* being able to collaborate with AI), (b) independent writing is no longer an important competency for most workplaces of the future, and (c) we should shift toward other means of assessing student knowledge and building student competencies that AI cannot (yet?) perform (e.g., oral presentations, demonstrations, discussions).

These arguments might sound ridiculous right now, but it is easy to envision a near future in which most writing is a collaboration between humans and AI. Your students are able to use AI to help write their exams and papers right now. ChatGPT helped me write a title for this column.[15] The way we are talking about AI now is very different compared to just 5 years ago. I don't want to sound alarmist, but we need to rethink some things.

One clear implication mentioned earlier is that perhaps we shouldn't teach students to write anymore. However, an important skill that many of us teach I-O psych students is to critically evaluate theory and findings from specific research studies in order to formulate conclusions and ideas for future research. ChatGPT struggles with questions about content from single, specific sources. Thus, although ChatGPT can write plausible, general content at a high school/early undergraduate level, at the moment it seems unable to meet the more stringent requirements of writing an undergraduate research paper, thesis, or dissertation. In other words, AI may raise the floor for writing quality, but it may also lower the ceiling. However, if we outsource most student writing to AI, and forgo teaching students how to write, how will we prepare students to write at a level that is appropriate for undergraduate research and to prepare them for research-intensive master's and doctoral programs? I don't have a great answer to this. Paper assignments could start with an AI-generated first draft distributed to the class, with students required to edit the draft while tracking their changes. For research papers, students could use AI to generate a first draft with the bulk of their time spent fact-checking against the relevant academic literature and revising the paper accordingly. Maybe intensive, advanced writing courses will be necessary for those students interested in pursuing graduate study or careers in academia. Alternatively, maybe we just wait a few years until AI can write a research paper too!

One alternative approach to writing-focused teaching and assessment is to concentrate on students creating products. For example, students in a psychometrics class may be tasked with creating a self-report survey measure of personality for use in a personnel selection context. ChatGPT is capable of generating such a survey measure, though I have found that many of the items suffer from well-known psychometric limitations (e.g., double-barreled wording). In this assignment students may use AI or any other relevant tools (short of plagiarizing others' work[16]) and are evaluated on the quality of the end product. One might also require students to explain and defend their product, perhaps in an oral presentation, as a means of assessing their knowledge. However, if AI is eventually able to create the product without any help from humans, then maybe we shouldn't teach that anymore because no one will hire our students to create a product that AI can create for free.

A slightly different approach would be to focus on students demonstrating relevant behaviors—like an assessment approach to evaluating student learning. For example, in an industrial psych or leadership class, rather than writing an essay about how to effectively deliver performance feedback, students must *demonstrate* this behavior in a business simulation exercise and are assessed on how well they executed the behavior.

These are two simple ideas for how to adjust to ChatGPT in the short term. However, the reality is that as a field we need to engage in discussions about the future of I-O psychology practice and education given these new (and likely future) developments in AI. We need to experiment with AI tools in our research and classrooms to better understand their potential uses—there are amazing opportunities here to develop innovative practices that transform education! Moving forward, I plan to encourage students to use ChatGPT for my writing assignments to better understand how they use AI tools, what changes I need to make to rubrics and other aspects of assessment, and what students learn from such assignments.

I believe that in the years to come we will be repeatedly confronted with evidence that AI can do more and more of the tasks that we consider core components of higher education. Many people are already questioning the value of higher education at this moment, for a variety of reasons that have nothing to do with automation. Educators have been discussing how to make students "robot proof" for almost a decade now. Practicing I-O psychologists perform many tasks that AI cannot presently, and maybe never will be able to do, such as delivering training, coaching and mentoring, facilitating employee communication and collaboration, designing and conducting research, and providing ethical and legal guidance.[17] These recent developments to AI, including ChatGPT, do not just force us to rethink how we assess learning, they force us to rethink everything that we are trying to accomplish as educators. We cannot provide value to our students if our academic programs focus on developing competencies that are no longer valued, prepare students for jobs that will not exist, or fail to incorporate the newest technologies (e.g., ChatGPT) into our classrooms. Welcome to the future!

## Notes

[1] For more info on how it works, please see my prior Max. Classroom Capacity column on robowriting

[2] I have no financial relationship with Open AI, writer.com, or Monkeylearn.

[3] Footnotes are used primarily to obscure from my editor the fact that I've trampled all over my word limit. Sorry Adriane! [*Editor's note: I'm on to you! Note to self: Loren needs a footnote limit.*]

[4] The year before, in the January 2021 issue, I wrote a Max. Classroom Capacity column on using AI to grade exams. I also recently tested whether ChatGPT is a helpful tool for grading. The short answer is that I don't think it is. I wish I had the space to go into more detail—if you're interested, feel free to e-mail me.

[5] I use the term "AI" loosely; I understand that some experts do not consider ChatGPT an AI.

[6] Extraneous "Z"s added to limit the proliferation of fake references online. Some tech writers call this propensity for AI to be convinced of something that isn't so "AI hallucination."

[7] In fairness, I did manage to get ChatGPT to write a paragraph about employee recognition in which all of the citations existed. However, as far as I could determine, ChatGPT's descriptions of the articles and findings were completely inaccurate, as employee recognition was not part of any of them.

[8] In contrast, ChatGPT seems able to generate plausible and somewhat novel nonspecific research ideas. It also was able to generate a reasonable if not too detailed research design and methodology to develop a new self-report measure of employee experiences, describing the design (mixed-methods), methodology (literature review, item generation, pilot testing, scale validation, interviews) and analyses (thematic analysis of interview data, CFA, correlations).

[9] Although not part of the exam, I asked ChatGPT to answer this question as well. It answered b. Although answer b is plausible, it does not reflect what Tversky and Kahneman *actually* wrote in their 1981 article (i.e., answer c).

[10] I subsequently resubmitted each exam question to ChatGPT and found similar, but not identical results. One MC question it answered incorrectly the first time it got right the second time, and vice versa for another question. ChatGPT performed slightly worse on the short answer/essay part the second time, providing some very similar answers, and others that were substantially different.

[11] I was going to link to a website that details how to cheat Turnitin but was too nauseated to go through with it. Such websites are not hard to find.

[12] I have colleagues who take samples of student writing at the beginning of a class and use them to evaluate the academic integrity of students' writing on subsequent written assignments.

[13] I cannot rule out whether this student's response was written with the help of AI, but I think it's very unlikely.

[14] Also intriguing: If you give ChatGPT a list of the ingredients you have on hand, it will generate a recipe for you using those ingredients. Does it work? The proof is in the chia seeds, nutritional yeast, canned black beans, tapatio, and pickled onions pudding… (I'm too scared to eat robo food yet!)

[15] **Query**: Please evaluate my current title for the article abstract that I showed you earlier and propose an improved version: "ChatGPT--OK, Maybe We Have to Rethink Some Things"
**Answer**: The current title "ChatGPT--OK, Maybe We Have to Rethink Some Things" effectively captures the author's shift in perspective toward ChatGPT and AI, but it could be more engaging and attention grabbing. An improved version could be: "ChatGPT Shakes Up Education: Rethinking Assessments and Efficiency" This title is shorter and more direct, it highlights the impact of ChatGPT on education and it gives the reader an idea of what to expect in the article. It also gives a sense of urgency, making it more appealing to read.

[16] I and many others have discussed the interesting questions concerning AI authorship and citation.

[17] I asked ChatGPT to generate a list of things I-O psychologists do that are unlikely to be replaced by AI. All of these items are from its answer.

**Brother, Where Art Thou? Building Membership in Local I-O Groups**

**Bill Handschin and Maryalice Citera**
**SIOP Local I-O Group Relations Committee**

The Local I-O Group Relations Committee's November 2022 Leadership Forum focused on building membership in local I-O groups. Participants in this forum represented the leadership of local I-O groups at various stages of development and from different geographical regions across the country. Not surprisingly, different groups had some membership building techniques in common and other techniques that were unique to their programs. The biggest divisions between different local I-O groups appeared to revolve around questions of the goals of the group: who the group was designed to serve, and with whom members of the group wanted to interact. The following is a summary of the presentation and follow-up discussions.

**How One Group Recruits Members**

Leading off was a presentation by Daniela Heitzman and **Lori Wieters** of the Applied Psychology Collaborative Group (APCG) based in Arizona. Although their group was initially formed before the advent of COVID as a local group in the Phoenix area, switching to Zoom as a platform during COVID allowed them to expand their reach. Having experimented with breakfast meetings, they now use a hybrid model and meet over the noontime period (11:15 to 12:30).

**Recruitment and Student Support**

Initially APCG recruited academics, consultants, practitioners, and students of I-O. One important goal of the group was to provide an internship-like experience for student members, as the local I-O graduate programs did not provide such an experience for their students. To accomplish that goal, APCG re-designed its meetings to create a collaborative problem-solving group, with presenters invited to bring a relevant problem or issue to the group for discussion. One problem was addressed at each meeting.

**Community Involvement and Non-I-O Membership**

APCG expanded the invitation to members of other communities, such as business, sales, technology, military, human resources, and manufacturing in order to bring real-life problems into the group for discussion. Their invitation techniques included recruiting by word of mouth and from LinkedIn, a roster of previous presenters, a Toastmasters group, a doctoral thesis Facebook group, and the Athena Valley of the Sun Women's group. Presenters represented various communities with specific problems including: schools, nonprofits (how to get the best talent), a yoga studio (how to build community engagement), a military defense manufacturer (how to get refocused on a purpose), an orchestra (how to search for permanent physical space), churches (how to create digital space for a congregation), and an assessment company (how to transition to the United States market). Presenters were screened and scheduled in advance of the meeting and provided training in how to structure the presentation of their problem or issue to the group. Presenters thus represented individuals from outside of the I-O group who could bring real problems to the group and provide a real problem-solving experience for students and other members. The meetings also provided exposure for I-O, familiarizing community members with the I-O field, and what we have to offer to the community at large. Presenters were invited back to join

as members, thus growing membership and building a group with a more diverse perspective on problems. A larger organization has the potential to afford a greater variety of programs on topics of interest but may also require more overhead, both financial and administrative.

**Internal Ethics and Identity Issues**

Concerns about membership also surfaced. One of the considerations at APCG was that care must be taken that members are not seen as stealing clients from other members. APCG also lost its identity as an I-O organization for a while through the inclusion of non-I-O members and had to recapture its identity as an I-O organization by rebranding. The discussion did not go into these topics in depth, but they might be topics for a local group to explore.

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**Additional Thoughts About Building Membership**

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In the discussion periods following the initial presentation, a number of ideas surfaced about recruiting members. Recruitment strategies deployed by local I-O groups to attract and retain members and speakers differed based on the stated purpose of the local group and the populations of interest. One group (PTCMW in Washington, D.C.) formed as a group of I-O psychologists talking to each other about topics of mutual interest. That group then began thinking about adding members of adjacent professions, such as data scientists, economists, and attorneys, all of whom may have an interest in but different perspectives on these same topics. Another group (Central Florida I/O-LIO) formed through universities and expanded across the state of Florida. FLIO networked with educational groups to build membership and then built a wider base by holding their meetings at various locations across the state. They also set up networking events for different areas of the state and opened membership to people from any profession. Additional ideas used by FLIO for driving recruitment and membership engagement included working through professors to spread the word, partnering with an organizational development network, relying on personal and online networking, and sending personal invitations. Some groups maintained a database of potentially interested individuals and sent invitations to the list for upcoming events.

**What Constitutes Success?**

As might be expected, success of recruitment and engagement strategies has been measured by different groups in different ways. The quickest way to measure success was to count the membership: Was it growing? Those groups that have taken a problem-solving model measured success in part by whom the group has been able to help and the results of the intervention. For a group with this model, the degree of interest in the community was gauged by the number of presenters who are interested in bringing their issues to the group, and the length of the waiting list. Several groups reported surveying members about their experience and using that information to measure success and to set new goals. More than one group found that membership dropped during COVID, and that getting members back to face-to-face meetings is not easy. As much as most of us disliked the initial change to online meetings, we are now rediscovering that in-person meetings require commuting time and parking expenses. This resistance to rejoining in-person meetings highlights the necessity for local I-O groups to provide unique and additional value for its members to motivate them to re-engage at pre-COVID levels.

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**Summary Thoughts**

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Building membership in a local I-O group is simplified by first answering two questions: For what purpose and for whom? Local I-O groups can be formed to serve primarily the needs of I-O psychologists, or

they can be expanded to include members of other professions to get their perspective on problems of interest to I-O psychologists and to build connections into the community. The purpose of the group will determine what will attract new members (e.g., networking opportunities, connecting with other I-O psychologists, educational programs, problem-solving programs, training opportunities, and providing continuing education credits). Once you know who you want in your group, the search for them becomes easier and the rationale for inviting them to join your organization becomes clearer. The group's choice of goals will dictate who you invite to meetings and what those meetings are designed to accomplish, thus creating ongoing value and engagement for your members. The Local I-O Group Relations Committee recommends local leaders use the ideas presented here to spark discussion in your local I-O group about your group's recruitment goals and how you might best accomplish them.

**Afterword**

The Local I-O Group Relations Committee hosts quarterly Leadership Forums for idea sharing and networking. We invite all interested leaders of local I-O groups to join us as we explore ways to build better and longer lasting local I-O groups. We invite you to visit SIOP's [Local I-O and Related Organizations](#) webpage, which includes a [Toolkit](#) of accumulated wisdom to help build a local I-O group (e.g., a bylaws template), a list of existing local I-O groups and leaders with contact information, additional resources for leaders, and an event calendar of committee activities.

Opening Up

Christopher Castille (Ed.)

Using Our Science to Improve Science

Haley R. Cobb, Jack C. Friedrich, and Candice L. Thomas
Guest Authors

"What makes [scientific research] difficult is that research is immersion in the unknown."
- Schwartz, 2008

For some time, open science has been touted as a tool to bolster—or rectify—the credibility of the psychological sciences. Open science "is an umbrella term used to refer to the concepts of openness, transparency, rigor, reproducibility, replicability, and accumulation of knowledge" (Crüwell et al., 2019, p. 1), and those researchers engaging in open science practices may, for example, openly share code and data, make details of study protocol openly available, preregister study designs and hypotheses, or post preprints of their work. Specific to our field, industrial-organizational (I-O) psychology has considered what benefits may come from open science and what practices may be most applicable to our field. However, Castille et al. (2022) were keen to point out that it is challenging to determine which open science practices to adopt or learn. Although these practices are on the rise, adoption broadly has been slow: Over the last 10 years, only 2–2.5% of journal articles in four of the most prominent organizational sciences journals contained open materials or open data (Tenney et al., 2021).

So, why is the uptake of open science slow? Although little research has been done on I-O psychology specifically, we can learn from other fields using open science. For example, scholars—47% of German psychologists in a study by Abele-Brehm and colleagues (2019)—feared that sharing data placed them at a competitive disadvantage. Others worry about their ideas being scooped or errors being detected when data are openly shared (Houtkoop et al., 2018) or that open science will stifle their creativity (Baumeister, 2016). We suggest that, for those scholars who are new to open science or may be hesitant to learn open science practices, incorporating *psychological* safety into one's open science practice can challenge these fears. There is ample evidence to suggest that psychological safety can improve work in many ways (e.g., creativity, innovation, information sharing), so why not incorporate these principles into our own work?

## Psychological Safety: A Very Brief Overview

Psychological safety can be thought of "as a shared belief that the team is safe for interpersonal risk taking" (Edmondson, 1999, p. 1), which may include sharing ideas, asking questions, voicing concerns, or pointing out mistakes without fear of negative repercussions (e.g., Edmondson & Lei, 2014). Psychological safety is relevant at multiple levels of analysis (e.g., individual, group/team, organizational) and related to a variety of outcomes (e.g., knowledge sharing, creativity, performance; Edmondson & Lei, 2014). There are a number of factors that predict and foster psychological safety in the workplace: Relationships with coworkers, leadership behaviors, and perceptions of employee support are all seen as important determinants of psychological safety (e.g., Carmeli & Zisu, 2009; Newman et al., 2017). For example, individuals are more likely to believe they will be given the benefit of the doubt when their relationships with group members are characterized by trust and respect (e.g., Newman et al., 2017). Additionally, leaders can engage in supportive leadership behaviors, inclusive leadership, being trustworthy, and valuing participation, allowing the leader to act as a model to show followers that it is safe to take

risks and communicate openly (e.g., Newman et al., 2017). Finally, employee perceptions of organizational support and trust are related to psychological safety (Carmeli & Zisu, 2009).

We posit that I-O psychology research team members and leaders may benefit similarly by feeling supported by their fellow research team members, exhibiting leadership qualities that support psychological safety, and feeling supported by their organization or department to try new open science practices. We continue this column by suggesting other ways that open science and psychological safety could go together, including suggesting some tips for our readers.

## Psychological Safety and Open Science

Psychological safety in the realm of open science may look similar and could be defined as the belief that one may share ideas, ask questions, voice concerns, point out mistakes, and innovate (e.g., adopt new open science practices) without fear of repercussion from research team members or from oneself. In the open science context, psychological safety could include feeling that colleagues will not ridicule or belittle you for mistakes identified in open materials, taking risks by engaging in new publication practices (e.g., registered reports), and being comfortable with seeking the greater level of feedback that comes with being open. Psychological safety, therefore, could occur for individual researchers (e.g., feeling psychologically safe to learn a new data sharing practice), teams of researchers (e.g., suggesting to a new research team that a research study be preregistered), and across our field more broadly (e.g., being met with understanding when honest mistakes are uncovered in openly shared materials). Shedding the fear of mistakes may result in an increase in openly sharing research materials, identifying errors and fixing them, and may also create more learning opportunities for researchers in general.

### For Individuals

For those I-O researchers who have yet to adopt open science practices or are hoping to learn new skills in this domain, doing so within a psychologically safe context should support outcomes such as learning, innovation, and risk taking. One of the chief worries researchers cite when discussing adopting open practices is loss of creativity by adhering to stricter research protocols. Setting aside the broader discussion of whether this is actually the case, psychological safety may support creativity and innovation and even learning. For example, among graduate students, psychological safety is associated with feelings of vitality and greater involvement in creative work (Kark & Carmeli, 2008), and learning through failure can occur through the cultivation of psychological safety (Carmeli & Gitell, 2009)—a necessity, given that there are numerous open science practices and tools, which researchers will inevitably implement with varying degrees of success as they adopt or change them to suit their needs. Individual researchers may recognize psychological safety when they no longer feel afraid to try something new, like adopting a new open science practice, and this experience may also allow them to promote psychological safety within their teams as a leader or as a team member.

### For Research Teams

Google's Project Aristotle highlighted that psychological safety was the most important factor to how their teams innovated (Bergmann & Schaeppi, 2016), suggesting just how powerful psychological safety can be for a team. Within research teams, each scholar can encourage questions, innovation, and openness across the research process. This also means being open to admitting mistakes and correcting them. For example, Strand's (2023) "Error Tight" protocol was designed to pinpoint, minimize, and correct for errors, and can be adopted by research labs and teams. It is important to note that fostering

psychological safety can be a collective effort, just as open science should be. Each member of a research team should experience psychological safety, just as they should also feel responsible to share research protocols and findings more transparently. Within our own research teams, the authors of this column have experienced and promoted psychological safety when using open science practices. That has looked like walking through preregistrations as a team, especially when new team members are unfamiliar with the Open Science Framework, and encouraging questions from all team members, regardless of their experience with open science.

**For the Broader I-O Community**

The broader scientific community, including ours, has historically not been so conducive to these ideas that we suggest here. For example, the "publish or perish" mentality is thought to contribute to engagement in unethical and consequential research practices, such as hypothesizing after results are known (HARK-ing) or *p*-hacking (Bedeian et al., 2010; Fanelli, 2010; Gopalakrishna et al., 2022). Additionally, the pressure to publish may lead to research that has little impact on the field and lacks creativity (Miller et al., 2011). Overall, it seems that publish or perish mentality may actually be harmful to the advancement of scientific inquiry and undermine the credibility of research (Simmons et al., 2011). These are all issues that open science and psychological safety have the potential to address; by promoting psychological safety in environments where open science is being practiced, scholars, their research teams, and their communities have the opportunity to learn more, reduce errors, innovate, and build upon each other's work in more impactful ways. The idea that a researcher—no matter their status—is immune to error or can produce high quality, high impact work at their baseline is an unreasonable expectation and undermines learning, growth, and opportunities to become better scientists and to produce better work in the future (e.g., Livio, 2013). This is especially applicable in classrooms, with students, and when adopting new open science practices that researchers and team members may be unfamiliar with but eager to learn.

## Supporting Diversity, Equity, and Inclusion

Although open science has many purported benefits, it is undeniable that embracing open science involves a large degree of risk for many scholars, both real and perceived. Castille et al. (2022) highlighted some issues regarding belongingness and open science, and here, we build on this conversation to suggest that psychological safety can be leveraged to not only make the adoption of open science practices easier but also to make academic research better for all who contribute. Issues of inequity are evident and persistent in the academy (e.g., Gabriel et al., 2023; Ledgerwood et al., 2022), and nontenured faculty are most susceptible to the publish or perish mentality (Miller et al., 2011), having more to lose than tenured faculty when it comes to the issues we have highlighted thus far. Psychological safety may be just one of many ingredients needed to create a more equitable and just academy.

Conversations around supporting psychological safety naturally fit within broader goals of increasing inclusion and belonging within our field and open science. Psychological safety is an integral part of inclusive climates—when people feel safe to share, ask questions, and voice concerns, in a space that is welcoming of their identities and backgrounds, they are likely more open to joining open science communities and engaging in the transparency and error management practices associated with open science. Research by Singh and colleagues (2013) supports this idea: psychological safety is associated with increased performance among racially diverse teams. However, the relationship between psychological safety and diversity, equity, and inclusion (DEI) goals is likely reciprocal: Building psychological safety within open science supports DEI and DEI initiatives and climates supports psychological safety within open science.

There is support for this directionality (i.e., DEI supporting psychological safety) as well: Building inclusive climates is associated with greater identification with the group and an increased willingness to both participate and help the group grow and learn (e.g., Singh et al., 2013). Parallel to the ideas posed by Castille et al. (2022) on how open science can support belongingness and inclusion, research on the intersection of DEI and psychological safety (e.g., Carmeli, 2007; Chen, et al., 2014; Newman et al., 2017) suggests that strong social networks, supportive mentors, and powerful allies facilitate the types of risk taking and community growth that supports open science practice.

We propose that we can both use psychological safety as a tool to help support and build inclusive research spaces, by creating a climate supportive of sharing and growth, and also use existing and ongoing efforts to support DEI to helping to build better psychological safety climates. Efforts to increase psychological safety and those working to increase DEI are working in tandem to support increased belongingness and participation within the open science community.

### Tips for Bringing Psychological Safety Into Your Open Science Practice

Readers may be wondering: *What can I do to help foster psychological safety in my lab, research teams, and community to promote the adoption of open science?* We offer a number of specific recommendations:

- Be open about mistakes, including as a leader (e.g., Liu et al., 2014)
- Focus on the quality of relationships as a research team member (Carmeli & Gitell, 2009)
- Practice inclusive or transformational leadership (e.g., Frazier et al., 2017; Javed et al., 2019)
- Offer support as an organization or journal editor by, for example, creating mentoring programs for open practices (e.g., Chen et al., 2014)
- For further reading on psychological safety, we recommend reviews by Edmondson and Lei (2014), Frazier et al. (2017), and Newman et al. (2017).

### Conclusion

No matter how (in)experienced an I-O scholar is, those who want to use more open science practices should be able to do so in an environment that is psychologically safe, where one can openly admit to honest mistakes, take risks, ask questions, and innovate. We hope that we can use I-O science on psychological safety to improve our science more broadly, in this case, by allowing for an easier adoption of open science practices. As we pursue opportunities to use open science practices and learn new ones, let us also feel psychologically safe to do so and to contribute to research that is more robust, reproducible, and transparent.

### References

Abele-Brehm, A. E., Gollwitzer, M., Steinberg, U., & Schönbrodt, F. D. (2019). Attitudes toward open science and public data sharing: A survey among members of the German Psychological Society. *Social Psychology, 50*(4), 252–260. https://doi.org/10.1027/1864-9335/a000384

Baumeister, R. F. (2016). Charting the future of social psychology on stormy seas: Winners, losers, and recommendations. *Journal of Experimental Social Psychology, 66*, 153–158. https://doi.org/10.1016/j.jesp.2016.02.003

Bedeian, A. G., Taylor, S. G., & Miller, A. N. (2010). Management science on the credibility bubble: Cardinal sins and various misdemeanors. *Academy of Management Learning & Education*, *9*(4), 715-725. https://doi.org/10.5465/amle.9.4.zqr715

Bergmann, B., & Schaeppi, J. (2016, July 12). A data-driven approach to group creativity. *Harvard Business Review*. https://hbr.org/2016/07/a-data-driven-approach-to-group-creativity

Carmeli, A. (2007). Social capital, psychological safety and learning behaviours from failure in organisations. *Long Range Planning, 40*(1), 30-44. https://doi.org/10.1016/j.lrp.2006.12.002

Carmeli, A., & Gittell, J. H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior, 30*(6), 709–729. https://doi.org/10.1002/job.565

Carmeli, A., & Zisu, M. (2009). The relational underpinnings of quality internal auditing in medical clinics in Israel. *Social Science & Medicine, 68*(5), 894–902. https://doi.org/10.1016/j.socscimed.2008.12.031

Castille, C. M., Cobb, H. R., Siegel, J. A., & Thomas, C. L. (2022). Opening up: Tips for fostering belongingness in our scholarly communities while encouraging open science. *The Industrial-Organizational Psychologist*, *60*(1).

Chen, C., Liao, J., & Wen, P. (2014). Why does formal mentoring matter? The mediating role of psychological safety and the moderating role of power distance orientation in the Chinese context. *International Journal of Human Resource Management, 25*, 1112-1130. https://doi.org/10.1080/09585192.2013.816861

Crüwell, S., van Doorn, J., Etz, A., Makel, M. C., Moshontz, H., Niebaum, J. C., Orben, A., Parsons, S., & Schulte-Mecklenbeck, M. (2019). Seven easy steps to open science: An annotated reading list. *Zeitschrift Für Psychologie*, *227*(4), 237–248. https://doi.org/10.1027/2151-2604/a000387

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, *44*(2), 350-383. https://doi.org/10.2307/2666999

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 23-43. https://doi.org/10.1146/annurev-orgpsych-031413-091305

Fanelli, D. (2010). Do pressures to publish increase scientists' bias? An empirical support from US States data. *PLoS ONE*, *5*(4), e10271. https://doi.org/10.1371/journal.pone.0010271

Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vracheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, *70*(1), 113-165. https://doi.org/10.1111/peps.12183

Gabriel, A. S., Allen, T. D., Devers, C. E., Eby, L. T., Gilson, L. L., Hebl, M., Kehoe, R. R., King, E. B., Ladge, J. J., Little, L. M., Ou, A. Y., Schleicher, D. J., Shockley, K. M., Klotz, A. C., & Rosen, C. C. (2023). A call to action: Taking the untenable out of women professors' pregnancy, postpartum, and caregiving demands. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, *16*(2).

Gopalakrishna, G., ter Riet, G., Vink, G., Stoop, I., Wicherts, J. M., & Bouter, L. M. (2022). Prevalence of questionable research practices, research misconduct and their potential explanatory factors: A survey among academic researchers in The Netherlands. *PLOS ONE*, *17*(2), e0263023. https://doi.org/10.1371/journal.pone.0263023

Houtkoop, B. L., Chambers, C., Macleod, M., Bishop, D. V. M., Nichols, T. E., & Wagenmakers, E.-J. (2018). Data sharing in psychology: A survey on barriers and preconditions. *Advances in Methods and Practices in Psychological Science, 1*(1), 70–85. https://doi.org/10.1177/2515245917751886

Javed, B., Naqvi, S. M. M. R., Khan, A. K., Arjoon, S., & Tayyeb, H. H. (2019). Impact of inclusive leadership on innovative work behavior: The role of psychological safety. *Journal of Management & Organization, 25*(1), 117–136. https://doi.org/10.1017/jmo.2017.3

Kark, R., & Carmeli, A. (2008). Alive and creating: The mediating role of vitality and aliveness in the relationship between psychological safety and creative work involvement. *Journal of Organizational Behavior, 30*(6), 785–804. https://doi.org/10.1002/job.571

Ledgerwood, A., Hudson, S. T. J., Lewis, N. A., Jr., Maddox, K. B., Pickett, C. L., Remedios, J. D., Cheryan, S., Diekman, A. B., Dutra, N. B., Goh, J. X., Goodwin, S. A., Munakata, Y., Navarro, D. J., Onyeador, I. N., Srivastava, S., & Wilkins, C. L. (2022). The pandemic as a portal: Reimagining psychological science as truly open and inclusive. *Perspectives on Psychological Science*, *17*(4). https://doi.org/10.1177/17456916211036654

Liu, S., Hu, J., Li, Y., Wang, Z., & Lin, X. (2014). Examining the cross-level relationship between shared leadership and learning in teams: Evidence from China. *Leadership Quarterly, 25*(2), 282–295. https://doi.org/10.1016/j.leaqua.2013.08.006

Livio, M. (2013). Don't bristle at blunders. *Nature*, *497*(7449), 309-310. https://doi.org/10.1038/497309a

Miller, A. N., Taylor, S. G., & Bedeian, A. G. (2011). Publish or perish: Academic life as management faculty live it. *Career Development International*. https://doi.org/10.1108/13620431111167751

Newman, A., Donohue, R., & Eva, N. (2017). Psychological safety: A systematic review of the literature. *Human Resource Management Review, 27*(3), 521-535. https://doi.org/10.1016/j.hrmr.2017.01.001

Schwartz, M. A. (2008). The importance of stupidity in scientific research. *Journal of Cell Science*, *121*(11), 1771-1771. https://doi.org/10.1242/jcs.033340

Simmons, J. P., Nelson, L. D., & Simonsohn, U. (2011). False-positive psychology: Undisclosed flexibility in data collection and analysis allows presenting anything as significant. *Psychological Science*, *22*(11), 1359–1366. https://doi.org/10.1177/0956797611417632

Singh, B., Winkel, D. E., & Selvarajan, T. T. (2013). Managing diversity at work: Does psychological safety hold the key to racial differences in employee performance? *Journal of Occupational and Organizational Psychology*, *86*(2), 242-263. https://doi.org/10.1111/joop.12015

Strand, J. F. (2023). Error tight: Exercises for lab groups to prevent research mistakes. *Psychological Methods*. https://doi.org/10.1037/met0000547

Tenney, E. R., Costa, E., Allard, A., & Vazire, S. (2021). Open science and reform practices in organizational behavior research over time (2011 to 2019). *Organizational Behavior and Human Decision Processes, 162*, 218–223. https://doi.org/10.1016/j.obhdp.2020.10.015

**The Bridge: Connecting Science and Practice**

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"The Bridge: Connecting Science and Practice" is a *TIP* column that seeks to help facilitate additional learning and knowledge transfer to encourage sound, evidence-based practice. It can provide academics with an opportunity to discuss the potential and/or realized practical implications of their research as well as learn about cutting-edge practice issues or questions that could inform new research programs or studies. For practitioners, it provides opportunities to learn about the latest research findings that could prompt new techniques, solutions, or services that would benefit the external client community. It also provides practitioners with an opportunity to highlight key practice issues, challenges, trends, and so forth that may benefit from additional research.

In this issue, **Kelsie Colley, Ludmila Praslova, Tiffany Jameson, Annika Benson,** Tracy Powell-Rudy, and Tracey Todd Staley provide a review of the current state of research/practice regarding neurodiversity in the workplace. They highlight how I-O can help organizations understand the benefits and moral imperative for advocating for the representation, understanding, flourishing, and belonging of neuroatypical individuals in the experience of work. The goal of their column is to shed light on gaps between neurodiversity practice and research and inspire readers to take steps of all sizes to bridge it.

**The Power of Partnership: Intentionally Building the Neurodiversity Science–Practice Bridge**

**Kelsie Colley, Ludmila Praslova, Tiffany Jameson, Annika Benson, Tracy Powell-Rudy, Tracey Todd Staley**

*Note: The viewpoints of the authors are their own and not the viewpoint of their respective companies and/or university affiliation.*

As an authorship team, we believe there is a significant opportunity for I-O psychologists to help bridge the gap between science and practice of neurodiversity. In this article, we provide a brief review of the current state of the bridge between science and practice regarding neurodiversity in the workplace. We then introduce an award-winning science–practice collaboration case study that demonstrates ways I-O psychologists can help employers move toward better understanding of neurodiversity. Finally, we suggest ways for how readers, including SIOP members, consultants, academics, and allies can help bridge the disconnect between science and practice.

**Current State of Research and Practice**

The authorship team agrees that we as a field are conceptually aware of neurodiversity. However, we lack understanding of what constitutes neuroatypicality or neurodivergence and how neurodiversity lived experiences, not just neurotypical research on the community, are related to organizational outcomes and can inform and expand the field (Praslova, 2021b). Moreover, neurodivergent talent is pigeonholed into specific occupations (e.g., autism and technology), ignoring the full range of abilities within neurodivergent communities (Dwyer, 2022; Praslova et al., in press). The intention to get support for buy-in is good, but the impact or unintended narrative could be damaging (see Benson et al., in press for more).

At the 2022 SIOP Annual Conference, among the 100 diversity, equity, and inclusion (DEI) submissions (Oki et al., 2022), there were three neurodiversity related sessions, whereas in 2021 there was only one, demonstrating slight growth. However, generally speaking, we believe I-O is behind the trend. Some argue that practice, especially within the autistic community, is far ahead of our literature in I-O psychology. Others echo this sentiment and even argue the gap is not improving but growing (Doyle & McDowall, 2021). It may be the case that our field is gaining momentum in DEI broadly (e.g., Lindsay et al., 2019) or that neurodiversity is getting more attention (e.g., Bruyère & Colella, 2022) but neglecting to take into consideration the neuroatypical experience.

As an exception to this trend, we share a science–practice collaboration case study that demonstrates how I-O psychologists can lead the charge in advancing market products, inclusion, and equity for neurotypical individuals. This research was a finalist in the 2022 Association for Business Psychology Awards for Excellence in Inclusive Assessment and won Top Poster at SIOP's Annual Conference in 2022.

**A Case Study: HireVue, Integrate, and Colorado State University (CSU)**

There are very real barriers within commonly applied selection procedures that have unintentional consequences and unnecessarily block autistic job seekers from getting jobs that they are otherwise qualified to do. HireVue draws on industry best practices to deliver structured, asynchronous video interview (AVI) assessments to job candidates.

Senior I-O psychologist at HireVue, **Colin Willis**, uses his expertise as a consultant and researcher to champion for equity within modern assessment practices. Integrate Autism Employment Advisors (Integrate) is a nonprofit organization that helps workplaces identify, recruit, and retain professionals (typically college graduates) on the autism spectrum. CSU's I-O psychology's research lab, led by **Joshua Prasad**, includes a research team with autistic individuals and is committed to advancing neurodiversity empirical work.

Interviewing is one of the most common methods, but it is unnecessarily challenging for autistic candidates. HireVue, Integrate, and CSU have partnered to study how autistic job candidates and general

population post-undergraduate job candidates perform on a real, algorithmically scored, interview-based assessment used for screening candidates.

The published and disseminated work from this team is novel as it studies real-world candidates' prehire assessments and can directly impact selection tools, practice, and outcomes for autistic job seekers (see Willis et al., 2021). This is a great example of a partnership between research and practice. It included subject matter experts across several domains—I-O psychologists from academia, I-O psychologists employed in the corporate space, and employer-focused practitioners from the consulting space—all with the shared purpose of driving neuroinclusive practices. This cross collaboration facilitated the sharing of expertise of both neurotypical and neurodivergent individuals, thereby bridging the gap between those two groups and between science and practice.

In summary, this case study included several strengths that helped support the closing of the science–practice gap:

- Partnership between domain experts, researchers, and practitioners
- Collaboration between autistic and other neuroatypical contributors
- Demonstrated how change can be achieved to a workplace, product, or service
- Disseminated findings in an open science source conferences and podcasts

**Experiences From Science and Practice**

To further support bridging the gap, the following section highlights individual author experiences regarding neurodiversity research and practice. Each author provides a unique perspective by sharing individual experiences, ideas, and areas of opportunities.

***Ludmila Prasolva, Vanguard University of Southern California and* Harvard Business Review**

Although I represent an academic perspective as an organizational psychology professor, I am also a neurodiversity inclusion activist with decades of lived experience, including neurodiversity-based discrimination (Praslova, 2021a,b).

Unfortunately, much of the existing research is rooted in the pathology model and uses assumptions and terminology rejected by the community: high and low functioning, person-first language, pathologizing of autistic honesty while normalizing allistic dishonesty, interventions that have the potential to harm, and occupational pigeonholing (Praslova 2021c; Praslova et al., in press).

Connecting research and practice is not enough. Both must also be connected to the neurodivergent community (Bernard et al., in press). Hence, I've been using my academic knowledge, my lived experience as a late-diagnosed autistic, and my love of writing to help connect both the voice of research and the voice of lived experience with the business community by publishing in *Harvard Business Review* and *Fast Company*. I am also writing a book that expands on my model for systemic and intersectional neurodiversity inclusion in the workplace that addresses both access barriers, such as hiring biases, and success barriers, such as biases in promotion and the lack of antibullying and antiharassment mechanisms (Praslova, 2022a,c).

I would love to see more work by teams in which researchers and practitioners, including members of neurodivergent communities, determine research questions, interpret the results, and outline appropriate application (Bernard et al., in press). Centering the neurodivergent community may require a good

deal of cultural humility from neurotypical researchers and practitioners, but it would also ensure most useful research and practice.

*Tiffany Jameson, LinkedIn Learning and grit & flow*

As inclusion consultants, my team at grit & flow focuses on revising organizations' processes, procedures, and norms to increase the inclusion of all. One key area we focus on is neurodivergent talent. As organizational psychologists, we have found that research on neurodivergent inclusion has predominantly focused on autism and the hiring process (Dreaver et al., 2020; McKnight-Lizotte, 2018).

The challenge we see in practice is ensuring a solid person–environment–job fit (Waisman-Nitzan et al., 2020) in collaboration with addressing the job demands (Meijman & Mulder, 2013) necessary for longevity and workplace thriving. Intentional hiring is only one step in the success of embracing neurodivergent workers. Supporting neurodivergent employees once they join an organization requires a conscious focus on enhancing current organizational practices. Examples of this include training line managers on communication techniques that embrace different types of learners such as using video, checklists, and written instructions. Also, there is a significant need to train managers and coworkers on giving concise instructions, avoiding the use of idioms, and establishing regular check-ins with team members to catch any potential miscommunications. These are some examples of enhancing organization practices to embrace neurodivergent workers that go beyond an emphasis on selection and must be further explored by science.

True acceptance requires making behavioral changes in an organization to ensure person–job–environment fit and adjusting processes to embrace various learning styles. Our challenge is that our clients want a playbook or a set formula for neurodivergent inclusion. However, every environment is unique, requiring a toolbox of best practices to be called upon while working to increase neurodivergent inclusion. There needs to be more research-based evidence on what practitioners consider to be best practices. For now, grit & flow has relied on other organizational psychology-based tools to help create an individual organization's toolbox of best techniques. When working with businesses, we often must break the organizations' social norms and rebuild them using a neurodiversity lens. Client engagements rarely offer controlled environments for experimental research, and our consulting presence usually involves balancing the business environment with multiple priorities and stakeholders. But, even with competing priorities, we can base intervention on research. Within our client's environment, we can define and measure the success of our interventions with the line managers and other stakeholders using time series quasi-experiment designs (McDowall et al., 1980). Measuring before intervention can help identify which interventions are best for changing the landscape for neurodivergent talent.

*Tracey Todd Staley, Autism Society of America and Spirax-Sarco Engineering*

With my work at the Autism Society of America, we see numerous pain points from our organizational partners. For example, I frequently hear how neuroatypical behaviors get in the way of individual success in the workplace. Although it should not be the full burden of the neuroatypical individual to "fit" into neurotypical expectations, it may be beneficial for some to receive coaching or training on how to communicate at work. However, this is only half of the picture. Workplaces need to have the policies, programs, and cultures to support neurodiversity. It would be ideal to look to science to understand how these two dynamic pieces should fit together to best serve the neuroatypical employee and the organization. Sometimes we can access open source science that directly helps bridge the gap (e.g., Seitz & Smith, 2016). However, organizations like ours typically do not have access to peer-reviewed publica-

tions. Instead, we rely on our experiences and other platforms like *Harvard Business Review* (HBR) or LinkedIn. If societies and supportive organizations had standing relationships with academics, we could rely on them to point us in the right direction and build a mutually beneficial partnership.

My experience as an HR leader is that it is typically not job or task-related concerns that impact the employee experience for neuroatypical folks. Instead, it is typically centered around social and communication events. Specific issues might include miscommunication, lack of communication, fear of raising an issue or asking for help, and expectations that neuroatypical candidates must fit into an existing culture. Often these are issues that can easily be addressed by educating coworkers about neurodiversity, improving communication skills for all employees, and building trust with employees so they feel comfortable identifying their needs. Research looking into neurodiversity could help drive research-based human resources and help internal groups like people analytics structure their internal research to ensure that the employee experience is equitable for all. Specifically, I'd like to see science-based insights to make the workplace more accessible and inclusive for neuroatypical people. To summarize, if we make the workplace more accepting of neuroatypical employees, it becomes more accepting of all employees.

### Tracy Powell-Rudy, Integrate Autism Employment Advisors

I would like to reinforce that change starts with awareness that the existing (in this case employment) practices or beliefs are inherently limiting, inappropriate, or problematic. To make any progress and, more specifically, to get research-driven practices into organizations, those organizations need to recognize that there is an issue/problem requiring a solution, and they must see value in collaborating.

Many people still do not realize how certain recruiting practices may inadvertently weed out neurodivergent talent. For example, marathon interview "superdays" or unstructured interviews that focus on interpersonal skills, which are not necessarily a prereq for *every* job, can be discriminating. Similarly, job descriptions that list 10 requirements that, when taken literally, may result in a viable autistic candidate self-selecting out.

Candidates that are successfully able to navigate the myriad challenges in the recruiting process and are hired are often terminated not because of performance issues but because of a lack of ability to understand the hidden curriculum (i.e., those unstated rules that allow us to "fit in.") However, once a manager is more aware of their own communication style and its impact on neurodivergent talent, they can, when coming from a place of *intention,* be more effective managers. And to truly impact the under- and unemployment rates for this population, these changes in processes and practices need to be sustainable, meaning that the corporate culture must undergo a transformation. The good news is that more neurodivergent candidates are getting hired and staying hired as more companies are making neuroinclusion an explicit goal and/or are starting neuroinclusive hiring programs. But do we know what specific actions are leading to success? How do we define it? What are the metrics for it?

There is very little, if any, research that specifically measures and reports on program (specifically corporate autism hiring initiatives) impact. We do not know what activities are truly facilitating long-term organizational culture and employee experience changes within companies who have programs specific to autism. We can do that by involving more I-O psychologists in the process when designing employment programs from start to finish. Coming up with metrics for success, tracking employee and manager performance over time, sharing best practices, and using solid, accepted, proven I-O practices in partnership with specific case studies will allow for effective efforts and continued success.

**Next Steps to Bridge the Gap**

Building off the success of the case study above and the authorship teams lived experiences, individual research streams, and perspectives on imperatives for closing the science and practitioner gap in the area of neurodiversity, we generated the following list of ideas for next steps to advance the understanding, practice, and inclusion of neuroatypical experiences. Note that, though our recommendations are split up between different domains, we feel strongly that none can be accomplished in silos.

**Ideas for advocacy groups or professional groups:**
- Promote a research-based, intersectional strategy when it comes to understanding neurodiversity and work.
- Leverage your network to help bridge the gap. Creating research-to-practice collaborations can be challenging. Professional networks can promote social networking to improve knowledge of others' work and expertise.
- If you are interested in forming a research–practice partnership, share it! Post about it on your website or social media pages; reach out to universities studying topics of interest.
- Familiarize yourself with open science sources such as
  - *Equality, Diversity and Inclusion*: Volume 41
    https://www.emerald.com/insight/publication/issn/2040-7149/vol/41/iss/3
  - "Annual Research Review: Shifting from 'normal science' to neurodiversity in autism science"
    https://acamh.onlinelibrary.wiley.com/doi/full/10.1111/jcpp.13534

**Ideas for SIOP**:
- Reach out and ask other organizations what they want to learn/know more about. Sample questions could include
  - What do you wish you had more information about?
  - Consider stages of the employee life cycle and barriers to access and success (Praslova, 2022c). Where do you lack resources for neuroinclusion support? Where might you have barriers?
- Invite researchers with lived experience to review or contribute to work on neurodiversity topics (Bernard et al., in press).
- Support open science publications which allows for an increase in accessibility between science and practice.
  - A "practical implications" section is not enough if those in practice cannot access it.
- Diversify leadership boards so that (a) neuroinclusive representation exists (Praslova, 2021c), and (b) practitioners are equally valued.
- Set standards and best practices for neuroinclusive graduate training programs and advising styles.

**Ideas for research avenues currently underexplored:**
- Masking/cloaking/camouflaging: How do these behaviors compare or relate to impression management, emotional labor, cognitive load, and perceived fit?
- Exploring gender differences: There are frequent gender differences when men and women are considered. How can we better understand this but also expand this to the full spectrum of gender and gender identities?
- Focusing on other areas of the employment life cycle beyond hiring and selection processes.
- Considering using qualitative and mixed methods to incorporate multiple stakeholders, work roles, and industries by capturing the lived experiences of the interventions and practices that increased inclusion and those that did not.

- Leaning into empirical program evaluation. We do not know what activities are truly facilitating long-term organizational culture and employee experience changes within companies who have programs specific to neurodivergent employees.
- Reviewing current language surrounding the population to ensure that you are not using ableist language in your writing (see Bottema-Beutel et al., 2020).

**Ideas for I-O consulting, HR, and people analytics:**
- Be creative and intentional about creating neuroinclusive organizations.  Be proactive and mindful of the requirement of cross-team efforts, change management, and revising social norms and practices. Include neurodivergent voices.
- Lean into the broader DEI strategy (see Oki et al., 2022).
- Familiarize yourself with open source resources (e.g., https://www.integrateadvisors.org/resources-for-employers/).
- Seek out or develop employee resource groups. Join as a community member or ally if your organization has a standing ERG. Encourage discussions around research and potential for academic partnerships to help drive research-based practices and more rigorous program management. Reach out to your DEI+ department to see if you could start a neurodiversity ERG.
- Connect with the people analytics team. Neurodiversity metrics should be tracked as other demographic groups, and intersectional identities should be considered. Set measurable DEI goals and track progress.
- Consider starting with a self-identification that you "are or are not neurotypical" in HR platforms like Workday (see Gabbard et al., 2014 for more on self-identification).
- Review what supportive organizations are talking about to see if you can identify any research gaps or connections to your research program (e.g., https://www.autism.org.uk/advice-and-guidance).
- Write job descriptions that are refined to include inclusive language and essential education and job requirements to better create a person–job–environment fit.
- Measure how and what interventions lead to greater neuroinclusion that can educate organizational psychologists on best practices and future research to refine interventions for neuroinclusion. Share the data collected on neuroinclusion and the insights gained with the academic community to enhance the development of assessments and interventions.

**Ideas for neurotypical allies:**
- Learn how to react appropriately to disclosure.
- Amplify autistic voices and share with others. The research suggests allies should do their part in educating others to reduce the burden on the neurodivergent community.
- Learn about, recognize, and reduce microaggressions and ableism: "I'm so ADHD today with my working."
- Promote easy-to-access trainings or books:
  - LinkedIn Learning: "ADHD in the Workplace-Understanding and Supporting ADHD Colleagues in the Workplace"
  - LinkedIn Learning: "Understanding Neurodiversity in the Workplace"
  - *Harvard Business Review* articles by autistic I-O psychologist (Praslova 2021b, 2022b,c)
  - *The Canary Code* book (Praslova, forthcoming, Berrett-Koehler Publishers)
- Consider searching the following hashtags to follow and use: #NeurodiversityAtWork #ActuallyAutistic.
- Celebrate and spread awareness/encourage inclusion on "week" events by sharing research-based best practices for inclusion and equity on your social media platforms. For example, World Autism Acceptance Week is March 27–April 2, 2023. See Praslova (2022b) for best practices on neuroinclusive celebrations and events.

## Authorship Information

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Kelsie (she/her) is a queer autistic PhD student at Colorado State University, Future of Work researcher at Zoom, and global lead of neurodiversity at Zoom Affinity Group. She studies the dynamic relationships among technology, strategy, culture, and diversity equity and inclusion. She is passionate about translating research to practice, measurement, and research-based people analytics to support employee flourishing. She is also passionate about sharing her lived experience as an autistic individual with ADHD.

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Tracy (she/her) is an autistic VP of corporate engagement at Integrate Autism Employment Advisors, whose goal is to increase competitive employment opportunities for college graduates with autism. She is also a mother of an autistic young adult woman and late diagnosed herself. She is passionate about raising awareness and increasing neuroinclusive practices across diverse industries and centering the neuordivergent voice.

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Tracey (she/her) is a business leader, leader of Autism Society of America, and the parent of an autistic son. She is passionate about making the workplace more accepting of neurodiverse employees.

## References

Benson, A. L., Colley, K., Prasad, J., Willis, C., & Powell-Rudy, T. (in press). Contextualizing cases for neuroatypical inclusion in the workplace. *Industrial and Organizational Psychology*.

Bernard, L., Fox, S., Kulason, K., Phanphackdy, A., Kahle, X., Martinez. L. R., Praslova. L., Smith, N. (in press). Not your "typical" research: Inclusion ethics in neurodiversity scholarship. *Industrial and Organizational Psychology.*

Bottema-Beutel, K., Kapp, S. K., Lester, J. N., Sasson, N. J., Hand, B. N. & Otr, L. (2020). Avoiding ableist language: Suggestions for autism researchers. *Autism in Adulthood*, *3*(1), 1–12, doi: 10. 1089/aut.2020.0014.

Bruyère, S. M., & Colella, A. (Eds.). (2022). *Neurodiversity in the workplace: Interests, issues, and opportunities*. Taylor & Francis.

Doyle, N., & McDowall, A. (2021). Diamond in the rough? An "empty review" of research into "neurodiversity" and a road map for developing the inclusion agenda. *Equality, Diversity and Inclusion: An International Journal*, *41*(3), 352–382.

Dreaver, J., Thompson, C., Girdler, S., Adolfsson, M., Black, M. H., & Falkmer, M. (2020). Success factors enabling employment for adults on the autism spectrum from employers' perspective. *Journal of Autism and Developmental Disorders, 50*(5), 1657–1667. https://doi.org/10.1007/s10803-019-03923-3

Dwyer. (2022). The neurodiversity approach(es): What are they and what do they mean for researchers? *Human Development*, *66*(2), 73–92. https://doi.org/10.1159/000523723

Gabbard, R. M., Sharrer, D. D., Dunleavy, E. M. and Cohen, D. (2014). New self-identification regulations for individuals with disabilities: Will a compliance-focused approach work? *Industrial and Organizational Psychology, 7*(1), 227–231, doi: 10.1111/iops.12137

Lindsay, S., Leck, J., Shen, W., Cagliostro, E., & Stinson, J. (2019). A framework for developing employer's disability confidence. *Equality, Diversity and Inclusion: An International Journal, 38*, 40–55.

McDowall, D., McCleary, R., Meidinger, E. E., & Hay, R. A. (1980). *Interrupted time series analysis.* SAGE Publications, Inc. https://doi.org/10.4135/9781412984607

McKnight-Lizotte, M. (2018). Work-related communication barriers for individuals with autism: A pilot qualitative study. *Australian Journal of Rehabilitation Counselling, 24*(1), 12–26. https://doi.org/10.1017/jrc.2018.4

Meijman, T. F., & Mulder, G. (2013). Psychological aspects of workload. In C. De Wolff, P. J. D. Drenth, & T. Henk (Eds.), *A handbook of work and organizational psychology* (pp. 15–44). Psychology Press.

Oki, T., Johnson, L. U., Mattingly, V., Powell-Rudy, T., & Lawal, T. (2022). Take the challenge: Five recommendations to advance DEI efforts in the I-O field. *The Industrial-Organizational Psychologist, 60*(1). https://www.siop.org/Research-Publications/Items-of-Interest/ArtMID/19366/ArticleID/6867/preview/true/Take-the-Challenge-Five-Recommendations-to-Advance-DEI-Efforts-in-the-I-O-Field

Praslova, L. (2021a, February 11). Dos and don'ts of inclusion by design. *SHRM.* https://blog.shrm.org/blog/7-do-s-and-don-ts-of-inclusion-by-design

Praslova, L. (2021b, December 13). Autism doesn't hold people back at work. Discrimination does. *Harvard Business Review.* https://hbr.org/2021/12/autism-doesnt-hold-people-back-at-work-discrimination-does

Praslova, L. (2021c, December 14). Neurodivergent people make great leaders, not just employees. *Fast Company.* https://www.fastcompany.com/90706149/neurodivergent-people-make-great-leaders-not-just-employees

Praslova, L. (2022a, March 14). To build a healthy workplace, you need a toxic culture alarm. *Fast Company.* https://www.fastcompany.com/90730688/to-build-a-healthy-workplace-you-need-a-toxic-culture-alarm

Praslova, L. (2022b, April 01). Your "Autism Awareness Day" might be excluding autistic people. *Harvard Business Review*. https://hbr.org/2022/04/your-autism-awareness-day-might-be-excluding-autistic-people

Praslova, L. (2022c, June 21). An intersectional approach to inclusion at work. *Harvard Business Review.* https://hbr.org/2022/06/an-intersectional-approach-to-inclusion-at-work

Praslova, L., Bernard, L., Fox, S., & Legatt, A. (in press). Don't tell me what to do: Neurodiversity inclusion beyond the occupational typecasting. *Industrial and Organizational Psychology.* https://doi.org/10.1017/iop.2022.105

Seitz, S. R., & Smith, S. A. (2016). Working toward neurodiversity: How organizations and leaders can accommodate for autism spectrum disorder. *Journal of Business and Management*, *22*(1), 135–152.

Waisman-Nitzan, M., Schreuer, N., & Gal, E. (2020). Person, environment, and occupation characteristics: What predicts work performance of employees with autism? *Research in Autism Spectrum Disorders, 78*(1), 101643–101643. https://doi.org/10.1016/j.rasd.2020.101643

Willis, C., Powell-Rudy, T., Colley, K., & Prasad, J. (2021). Examining the use of game-based assessments for hiring autistic job seekers. *Journal of Intelligence, 9*(4), 53.

**"Nobody Wants to Work Anymore":**
**Reflecting on I-O Psychology's Assumptions and Values Through the Lens of the Antiwork Movement**

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The antiwork movement provides a unique framework for I-O psychologists to consider their core assumptions and values about work and organizations. The antiwork movement is rooted in Marxist, socialist, anarchist, and feminist philosophies that critique capitalism and power in relation to work (Frayne, 2011; Seyferth, 2019; Shuster, 2022; Weeks, 2011). This movement calls attention to issues related to exploitative organizational practices that prioritize profit over people, inequities at work, and grind/hustle culture. Ultimately, the aim of the antiwork movement is to "problematize work as we know it today" (Reddit, 2022). However, the specific goals of the antiwork movement are broad and vary from shifting ideologies about the prioritization of work, to improving working conditions and workers' rights, to abolishing work and organizations altogether. On Reddit, the r/antiwork subreddit community has 2.4 million members,[1] and they describe their viewpoints as: "We're not against effort, labor, or being productive. We're against jobs as they are structured under capitalism and the state: Against economic relations, against hierarchical social relations at the workplace." In this way, the notion that "nobody wants to work anymore," may be better rephrased as "nobody wants to work *like this* anymore." The antiwork movement, and particularly the subreddit associated with it, has gained significant attention over the last 2 years, as evidenced in news headlines (e.g., Aratani, 2021; Blair, 2022; Codrea-Rado, 2021; Davies, 2021; Flynn, 2022; Goldberg, 2021; Hunt, 2021; Majoo, 2021, O'Connor, 2022; Olivas, 2022, Pirnay, 2021; Todd, 2021) and across social media platforms.

The apparent absence of literature or discussions of antiwork within I-O psychology research and practice is surprising given our field's focus on work and organizations. Therefore, we believe it is worthwhile for I-O psychologists to be aware of, and involved in, antiwork conversations. We recognize the relevant (though not explicitly "antiwork") existing literature that has been engaged in noteworthy discussions of capitalism, power, and critical theory in I-O (e.g., Baritz, 1960; Gerard, 2017; Islam & Sanderson, 2022; Mumby, 2019; Woo et al., 2021). To build upon this, we offer reflection questions, informed by antiwork viewpoints and broader critical theory, for I-O psychologists to ponder and discuss. These questions are intended to stimulate critical thinking about our personal ideologies and assumptions about work and to help us clarify the professional identity of I-O psychologists and the field of I-O psychology.

- **How do antiwork ideas (e.g., critiques of capitalism, who holds power, and status quos in organizational practices and treatment of workers) impact I-O psychologists?**
  - In what ways do antiwork ideas challenge I-O psychology research and practice? What would the field of I-O look like if work was restructured to deemphasize capital/profit? What role does I-O psychology research and practice play within the antiwork movement?
- **What is the purpose of work in the 21st century?** (Hyland, 2023)
  - Why do we work—collectively and individually? Is the purpose of work to survive (i.e., meet basic needs)? To attain status or power? To provide meaning? To derive joy? Can these purposes be fulfilled through other means? If so, how does that change work? Who benefits from work?
- **Why is work structured the way it is (e.g., hours, days of the week, modality)?**

- o   Who decides how work is structured? Who benefits from this structure? What would alternative structures look like?
- **Do we expect everyone to work?** (e.g., Mumby, 2019)
  - o   What assumptions do we hold about individuals who do *not* work? For whom is it socially acceptable to be unemployed? In what ways do those who choose not to work contribute to society? Is working the best way to contribute to society?
- **What type of work do we value?** (e.g., Ashforth & Kriener, 1999; Duffy, 2007)
  - o   Who decides what type of work is valued? How is valued work rewarded? Who decides how it is rewarded? How do we view volunteer work, homecare tasks, or other forms of unpaid labor?
- **What is the purpose of rest?** (e.g., Hersey, 2022)
  - o   Who is allowed to rest? When is rest discouraged or stigmatized? Is rest a human right?
- **What is the purpose of organizations?**
  - o   Is the purpose of organizations to build profit? To benefit workers? To improve societal conditions (i.e., for the Earth and its inhabitants)? Who benefits from organizations?
- **Who holds power in organizations?** (e.g., Fleming & Spicer, 2007; Fleming & Spicer, 2014; Magee & Galinsky, 2008)
  - o   Where does power come from? Can power be distributed differently or more equitably? What do organizations owe their workers? What do workers owe their organization?

  Beyond these reflection questions, there are also unique antiwork research questions that I-O psychologists are equipped to answer, ideally with collaboration and input from others with relevant experience (e.g., labor unions, workers) and expertise (e.g., scholars in sociology, anthropology, philosophy, communications, feminist studies, and/or political science), some of whom have already made headway on studying the movement and related areas like resistance in organizations (e.g., Fleming, 2015; Fleming & Spicer, 2010; Frayne, 2011, 2015; Mumby, 2005; Seyferth, 2019; Shuster, 2022; Spicer & Fleming, 2016; Weeks, 2011). Research-related questions stemming from the antiwork movement may include:

  - How is the antiwork movement related to other recent labor-related phenomena, such as large-scale strikes, the Great Resignation, and quiet quitting? (e.g., Olivas, 2022; Shuster, 2022)
  - How is the antiwork movement related to broader societal issues, such as the COVID-19 pandemic, economic conditions, climate change, and political unrest? (e.g., Aratani, 2021)
  - How can theory help us understand the antiwork movement? What theories are relevant to antiwork (e.g., critical theory, equity theory, ERG theory, resistance theory)?
  - How does the antiwork movement fit into, or contrast with, I-O topic areas related to vocational interests, calling, meaningful work, burnout, or organizational commitment?
  - In what ways can antiwork viewpoints and philosophies influence industries, organizational practices (e.g., reconsideration of policies, procedures, or treatment of workers), and/or employees (e.g., cynicism, turnover)?

## Conclusion

We view the antiwork movement as a noteworthy sociohistorical event that is prompting critical thinking, conversations, and questions that are relevant to the field of I-O psychology. Specifically, we believe that reflecting on these questions will help us, as individuals and as a collective field, be more intentional about shaping the world of work we envision. I-Os can use the antiwork movement as a framework for contemplating their assumptions and values, for developing unique and timely research questions, and for thinking creatively and flexibly about the purpose of modern work and organizations.

**Note**

[1]As pointed out by a reviewer, it is impossible to guarantee that all members of the subreddit community can be authenticated or share similar views of antiwork.

**References**

Aratani, L. (2021, November 28). *Goodbye to the job: How the pandemic changed Americans' attitude toward work.* https://www.theguardian.com/money/2021/nov/28/goodbye-to-job- how-the-pandemic-changed-americans-attitude-to-work

Ashforth, B. E., & Kreiner, G. E. (1999). "How can you do it?": Dirty work and the challenge of constructing a positive identity. *Academy of Management Review, 24*(3), 413-434.

Baritz, L. (1960). *The servants of power: A history of the use of social science in American industry.* Wesleyan University Press. https://doi.org/10.1037/11283-000

Blair, D. (2022, January 26). *Meet the 1.6 million "redditors" who want to abolish work.* https://www.dailysignal.com/2022/01/26/meet-1-6-million-redditors-who-want-to- abolish-work/

Codrea-Rado, A. (2021, December 22). *Inside the online movement to end work.* https://www.vice.com/en/article/y3vwjw/inside-the-online-movement-to-end-work-antiwork-sub-reddit

Davies, P. (2021, November 25). *Reddit's r/antiwork subreddit is boycotting Black Friday and e-commerce giants such as Amazon.* https://www.euronews.com/next/2021/11/25/reddit-s-r-antiwork-subreddit-is-boycotting-black-friday-and-e-commerce-giants-such-as-ama

Duffy, M. (2007). Doing the dirty work: Gender, race, and reproductive labor in historical perspective. *Gender & Society, 21*(3), 313-336.

Fleming, P. (2015). *Resisting work: The corporatization of life and its discontents.* Temple University Press.

Fleming, P., & Spicer, A. (2010). *Contesting the corporation: Struggle, power and resistance in organizations.* Cambridge University Press.

Fleming, P., & Spicer, A. (2014). Power in management and organization science. *Academy of Management Annals, 8*(1), 237-298.

Flynn, S. (2022, January 27). *The Reddit antiwork saga–and whether there's really a world without jobs.* https://www.independent.co.uk/news/world/americas/antiwork-quit-job-pandemic-reddit-b2002265.html

Frayne, D. (2011). *Critical social theory and the will to happiness: A study of anti-work subjectivities* [Unpublished doctoral thesis]. Cardiff University.

Frayne, D. (2015). *The refusal of work: The theory and practice of resistance to work.* Bloomsbury Publishing.

Gerard, N. (2017). Handmaidens to capitalism. *Industrial and Organizational Psychology, 10*(3), 410–414.

Goldberg, E. (2021, December 4). *Public displays of resignation: Saying "i quit" loud and proud.* https://web.archive.org/web/20211204101013/https://www.nytimes.com/2021/12/04/business/public-resignation-quitting.html

Hersey, T. (2022). *Rest is resistance: A manifesto.* Little, Brown Spark.

Hunt, E. (2021, October 27). *Ready to quit your job? Come and join me in the anti-work movement.* https://www.theguardian.com/commentisfree/2021/oct/27/quit-your-job-join-anti-work-movement-elle-hunt

Hyland, P. (2023). All we like sheep: The need for reflection and reflexivity in I-O psychology. *Industrial and Organizational Psychology: Perspectives on Research and Practice.*

Islam, G., & Sanderson, Z. (2022). Critical positions: Situating critical perspectives in work and organizational psychology. *Organizational Psychology Review, 12*(1), 3–34.

Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *Academy of Management Annals, 2*(1), 351-398.

Majoo, F. (2021, October 22). Even with a dream job, you can be antiwork. *New York Times.* https://www.nytimes.com/2021/10/22/opinion/work-resignations-covid.html

Mumby, D. K. (2005). Theorizing resistance in organization studies: A dialectical approach. *Management communication quarterly*, *19*(1), 19-44.

Mumby, D. K. (2019). Work: What is it good for? (Absolutely nothing)—A critical theorist's perspective. *Industrial and Organizational Psychology*, *12*(4), 429–443.

O'Connor, B. (2022, January 27). The rise of the anti-work movement. *BBC.* https://www.bbc.com/work-life/article/20220126-the-rise-of-the-anti-work-movement

Olivas, B. (2022, January 28). *r/Anti-work and the need for revolutionary organization.* https://social-istrevolution.org/r-antiwork-and-the-need-for-revolutionary-organization/

Pirnay, E. (2021, February 15). *Inside the Reddit community calling for the abolition of work "unemploy-ment for all!."* https://www.huckmag.com/art-and-culture/inside-the-reddit-community-calling-for-the-abolition-of-work/

Reddit. (2022, November 1). Antiwork: Unemployment for all, not just the rich! https://www.red-dit.com/r/antiwork/wiki/index/#wiki_frequently_asked_questions

Seyferth, P. (2019). Antiwork: A stab in the heart of capitalism*.* In R. Kinna & U. Gordon (Eds.), *Routledge handbook of radical politics* (pp 374-390). Routledge. https://doi.org/10.4324/9781315619880

Shuster, N. (2022, September 15-18). *Big-box retail workers, the great resignation, and the anti-work movement* [Paper presentation.] American Political Science Association 2022, Montreal, Quebec, Canada.

Spicer, A., & Fleming, P. (2016). Resisting the 24/7 work ethic: Shifting modes of regulation and refusal in organized employment. *Sage Handbook of Resistance*, 121-134.

Todd, S. (2021, December 20). *What Reddit's million-strong antiwork community can teach the rest of us.* https://qz.com/work/2103779/reddits-antiwork-sub-has-mainstream-appeal

Weeks, K. (2011). *The problem with work: Feminism, Marxism, antiwork politics, and postwork imagi-naries.* Duke University Press.

Woo, V. A., Schmidt, G. B., Aiken, J. R., Islam, S., Albeg, A. C., DePatie, T. P., Gelesko, G., & Voss, J. (2021). Where no one has gone before. *Industrial and Organizational Psychology*, *14*(1-2), 55–60.

# Listening to Employees to Confront Postpandemic Turnover

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At the start of the COVID-19 pandemic in the United States, many organizations were faced with the question of how to adjust to remote work. As the pandemic becomes more manageable, organizations are now grappling with how to move forward in a postpandemic world. Organizational development using survey feedback can improve these transitions via employee listening (e.g., Allen et al., 2020). Employee listening is defined herein as

> the creation and implementation of scaled processes and systems that enable decision makers and policy makers in organizations to actively and effectively access, acknowledge, understand, consider and appropriately respond to all those who wish to communicate with the organization or with whom the organization wishes to communicate interpersonally or through delegated, mediated means. (Macnamara, 2019, p. 5191).

In other words, listening involves both the solicitation of data and a response to the findings. There are a variety of employee data solicitation techniques that organizations can use including annual surveys, pulse surveys, reviewing social media (e.g., Reinikainen et al., 2020), and fireside chats with leaders and managers.

Listening to employees provides a foundation for critical organizational processes (e.g., team coordination, follower engagement; Yip & Fisher, 2022) and has been associated with an abundance of positive outcomes for the organization and employee, including increased retention, job commitment, organizational identification, and job satisfaction (e.g., Macnamara, 2020; Reed et al., 2014). Furthermore, poor listening can inhibit the benefits of employee voice behavior (expressing change-oriented ideas and suggestions; e.g., Yang, 2017). Thus, during a time when voluntary turnover is on the rise and competition for quality talent is high (Grant, 2022), organizations wanting to improve employee retention, morale, and performance may wish to better understand employee perspectives via employee listening.

Employers are increasing the question quantity of their employee surveys, with a 2021 Glint Inc. report showing a 207% increase in surveys between 1 and 10 questions and a 158% increase in surveys between 10 and 20 questions. Likewise, Glint Inc. (2021) found that employees are being surveyed more frequently, with averages rising from four times a year to seven times a year. However, *more* employee listening does not necessarily imply *better* employee listening. In a 2022 SIOP Annual Conference virtual session, *Should I Stay or Should I Go*? *Employee Listening to Address Postpandemic Turnover,* panelists (**Lisa Black** and Drs. Dana Auten, **Stephanie Downey, Lauren Harkrider Beechly, Rana Moukarze**l, Olivia Reinecke, and **Pooja Vijayakumar**) representing various national and international private companies (e.g., Energage, Glint Inc., The Predictive Index, Perceptyx, PepsiCo, and Papa Johns International) discussed employee listening strategies as well as methods of addressing postpandemic turnover. The purpose of the current paper is to share information gleaned from this session. Specifically, the first aim is to describe and evaluate common practices in employee listening. The second goal is to suggest reasons

for employee retention and turnover identified by our panel of listening experts. In doing so, this article disseminates information collected by practitioners representing multiple employee listening platforms.

## Employee Listening Practices

In order to address our first aim, we asked our panelists about their organizations or client organizations' employee listening strategies. Based on their responses, we identified common practices related to data collection and enacting change. Panelists also evaluated the relative success of these various strategies, from which we delineated some best practices (see Table 1).

**Table 1**
*Best Practices Identified by 2022 SIOP Annual Conference Employee Listening Panel*

| Theme | Practice | Considerations |
|---|---|---|
| Data collection strategy | Consider the needs and resources of the organization | There is no one-size-fits all strategy for employee listening. Organizations should consider their needs when crafting what questions to ask to whom and also if they have the resources to examine the data they receive. |
| | Use targeted listening techniques | Many employee listening tools stop at asking employees about their intentions to stay or leave. Diving deeper into the "why" (e.g., how much does pay impact your intention to stay) can help organizations get a richer understanding of their employees. |
| | | Additionally, use stay surveys, which ask employees why they are choosing to *stay* in the organization. |
| | Develop tools for hourly and professional employees | Aim to examine the unique perspectives of hourly and professional employees. |
| | Utilize onboarding surveys and exit surveys | When used effectively, organizations can begin to understand what they may do differently to retain employees. |
| | Consider linking different business metrics together | Linking employee attitudinal surveys with administrative data can help organizations understand the bigger picture of an issue. |
| | Consider shorter surveys | Short surveys are likely to take up less employee time and be less prone to attention issues. |

| | Reconsider the frequency of your surveys | If you have not solved the issue you identified in a previous survey, it is likely too soon to do another. |
|---|---|---|
| | | A quality employee listening program is not entirely about frequency; it is about identifying what questions you are trying to answer and what channels you need to listen to. |
| | | Surveys could be conducted based on need. If you do not have a question, reconsider a survey. |
| | The fresher the data, the timelier the solution | Organizations might aim to develop strategies to see feedback in real time. This means having the resources for employees to promptly analyze data and pass it along to leaders. |
| Utilize data to inform change | Be open to hearing employee perspectives | Be prepared to develop for problems that were unknown and for diving deeper into employee concerns. |
| | | In a time of extreme competition, organizations may need to look at their pay structure. |
| | Be prepared to act on employee concerns | Employees recognize when organizations are listening. But they also recognize when an organization knows and does not take action on resolving their concerns. |
| | Address survey results before surveying employees again | Frequent pulse surveys are very common, but if the organization is not addressing employee concerns before sending out additional surveys, it may send the impression that employers are collecting data but not actually listening. |

**Data Collection Strategy**

Each panelist described their organization's methods for employee listening, using at least some of the *Five Ws and How Questions* to collect information about a problem. That is, successful employee listening strategies explained *who* the organization aimed to listen to, *what* information they wished to procure, *when* and how often employees would be surveyed, *where* data would be collected (e.g., online, in-person chats), *why* employees were being surveyed, and *how* the organization planned to gather this information. These six questions are valuable to most employee listening strategies because they provide structure for the organization to build and evolve their program. For example, employee listening techniques can offer insight into employee attitudes, intentions, and behaviors, but there should also be a purpose to the listening (*why*) or a question that the organization wants to address. Each organization may have different questions, but it is helpful for the organization to identify what they want to know and to understand that if the organization has not addressed a challenge discovered in the prior survey, perhaps it is not appropriate to survey employees again.

Also, the organization needs to identify *who* are its target employees. For example, an organization may be concerned with high rates of turnover specifically in their hourly (versus salaried) employees. In order to address this specific question, it might be more feasible and cost-effective to survey the hourly em-

ployees about their intentions to leave, instead of utilizing a broad, organizational-wide annual survey. An organization may also wish to know if individuals prefer remote versus in-person work. In this case, the organization may prefer to seek information from employees at all levels of employment. It is only worthwhile to target or exclude certain employees if (a) relevant (e.g., jobs that require the use of in-house equipment or software) and (b) the employees can be identified efficiently (e.g., the entire janitorial staff versus a few designers in particular).

Next, organizations might consider *when* they should be listening to their employees in terms of timing and frequency. Depending on the job and industry, ideal survey timing may be affected by day of the week, season, quarter, or other calendar concerns. Additionally, panelists discussed the criticality of fresh data, so data must be collected sufficiently frequently to ensure they are not outdated. Collecting data in real time can help the organization better understand the employee's perspective on timely issues. For example, if an organization was in the midst of implementing a new performance appraisal system, using pulse surveys (e.g., Jolton & Klein, 2020) could help the organization understand if employees are frustrated with the new program or need additional training. This is useful to the organization because an annual survey may be too late (and too broad) to address the employees' concerns. That is, the time to give employees additional training on the performance appraisal system was at its inception, not after employees were disgruntled or resigned to the system. A caveat is that when the organization collects this data, they should be ready to discuss them and develop a plan to move forward to address the data. This suggestion is contrary to some research designs in which multiple baseline measurements are used in order to represent fluctuating variables (e.g., workload for professors). Listeners are encouraged to carefully consider timing given these competing concerns.

Finally, organizations decide *where* and *how* they wish to listen to their employees. A variety of employee listening tools exist, including robust longitudinal surveys and pulse surveys, which have been growing in popularity. Additionally, fireside conversations between top leaders and employees may promote more intimate discussions about the organization's direction and culture and allow leadership to get a richer understanding of employees' perspectives. However, not all listening techniques are equally appropriate to answer the organization's particular questions. For example, some employees may not be willing to share negative feedback about the organization via fireside chats, where they can be easily identified and may fear repercussions. In this case, a survey conducted online may produce more honest responses about organizational challenges, as long as the organization can assure individuals that their survey responses will be anonymous.

**Utilizing Data to Inform Change**

The next trend our panel identified was related to the use of information collected from employee listening programs. Although surveys inherently communicate to employees what the organization cares about, without adequate response to surveys, the organization does not meet the definition of listening. Ideally, the response might include taking steps to ameliorate the source of employee complaints, but an adequate response might also include leader efforts to show understanding and empathy and perhaps transparently communicating barriers to change. However, some panelists expressed concern that organizations were neglecting data altogether in favor of a gut feeling or desire to "return to normal," referencing the prepandemic normal of the organization. For example, some leaders believe that the quality and quantity of their employees' work has suffered due to remote employment, even when faced with administrative data to the contrary that profits and productivity have increased.

Furthermore, about 50% of organizational leaders want full-time in-person work, but this does not match with preferences for job seekers (Microsoft, 2022). Indeed, recent reports show that 60% of workers with jobs that can be done from home would prefer to work from home (Parker et al., 2022). This mismatch between leaders and job seekers might be of consideration when organizations ask employees their preference. Organizations should be reasonably prepared to at least consider it when making their decisions because it will likely drive employees' intentions to stay.

Relatedly, employees may also need to be assured that their feedback is being collected in good faith. That is, panelists pointed out that employees notice when an organization is listening to them, but they also notice when the organization collects the data and does not address the issues identified. It is thus crucial for the organization to build trust that data is being collected to actually address issues employees face, not solely for the purpose of collecting data. This is not an uncommon sentiment, with articles on corporate listening reporting that perceptions of employee voice are useless to employees if the organization is not also employing active listening (Macnamara, 2020). Surveys can provide insight into employee perceptions of effective listening at the managerial and organizational level.

**Drivers of Postpandemic Turnover**

Our panelists also discussed the findings of some of their employee listening strategies as they pertain to turnover. One of the major contributors to turnover identified via listening was the loss of work-from-home arrangements. COVID-19 lockdowns introduced the highest rate of telework in U.S. history because many organizations were faced with the choice to allow their employees to work from home or to fully shut down. Some employees are now leaving organizations because of requirements to return to in-person work. In some cases, organizations have used phased returns or allowed for a hybrid work environment with some telework. However, even in those organizations that are not requiring full-time in-person work, employees are voluntarily leaving. Panelists reported that employees expressed that the cost to return to work in-person outweighed the benefit. These costs were varied, including monetary (e.g., gas) and time-based (e.g., commute to work) expenses. Individuals with children seemed particularly motivated to avoid a lengthy commute in order to minimize time away from the family and increased childcare costs. In fact, panelists inferred that a return to in-person work may be related to disproportionate voluntary turnover in specific demographic groups, such as women with children, who may have grown to embrace flexible working arrangements (e.g., flextime, flexplace). Thus, longitudinal employee listening programs paired with administrative data can help organizations identify whether flexible work arrangements, which have been shown to reduce turnover for a variety of reasons (e.g., McNall et al., 2009), would help alleviate their unwanted turnover.

Additionally, panelists cautioned that a lack of resources to support flexible work arrangements precipitated voluntary exit for some employees. Although many organizations did not have telework policies prepandemic, they were forced to adjust very quickly. Employees were generally understanding that they had to make due with limited resources temporarily (e.g., using a personal computer while awaiting company equipment). However, it has been almost 3 years since the initial pivot, and many employees who have left organizations reported a struggle to get the job done due to a continued lack of resources. For example, if an employee is teleworking but cannot reach their supervisor remotely for guidance, whereas they were previously able to walk down the hall for support, they may now be inclined to leave their jobs. Additionally, an employee may feel frustrated if an organization does not have the infrastructure to support work in the postpandemic environment (e.g., online conferencing software and equipment). Employee listening can be used to determine if there are gaps between employee needs and organizational supplies.

Finally, panelists also reported that employees felt a lack of appreciation. It is important to note that perceived lack of appreciation can be a relatively stable job attitude, but it can also be a short-term emotion. Coupling an annual survey with pulse surveys throughout the year can help organizations understand long-term and short-term perceptions of appreciation. They can also identify factors that contribute to a perceived lack of appreciation. For example, during the pandemic, many employee recognition programs were digitized with often limited success. That is, it is helpful if an organization recognizes that employees are feeling unappreciated as well as why their employees feel unappreciated. This is crucial because an organization can waste time and resources investing in an intervention that does not target the reason employees feel unappreciated and thus exit the organization.

## Conclusion

In order to move forward in a postpandemic world, it is greatly beneficial for organizations to listen to their employees and employ quality listening strategies that fit their goals and capabilities. Moreover, it is imperative that effective listening also utilizes data to guide organizational change (e.g., Allen et al., 2020). That is, listening is not simply data collection; it is essential to analyze the data and use it in real time to inform change. If unable to instrumentally address the problem, other forms of listening can include leader transparency, acknowledging problems, and communicating attempts to resolve workplace complaints. Especially in the case of postpandemic turnover, it would behoove organizations to better understand and respond to their employees' perspectives and needs before they exit their organizations. Although expensive, the benefits of surveying outweigh the costs of unwanted turnover, such as losses to institutional knowledge, new hire recruitment and training, and decreased morale.

## References

Allen, J. B., Jain, S., & Church, A. H. (2020). Using a pulse survey approach to drive organizational change. *Organization Development Review, 52,* 62–68.

Glint Inc. (2021). Survey frequency and length: Pre and post pandemic. *Unpublished internal report.*

Grant, A. M. (2022). The Not-So-Great Resignation. In *Worklife with Adam Grant.* Retrieved from https://podcasts.apple.com/in/podcast/the-not-so-greatresignation/id1346314086?i=1000557193263

Jolton, J. A., & Klein, C. (2020). Exploring the universe of pulse surveys and continuous listening opportunities. In W. H. Macey and A. A. Fink (Eds.), *Employee surveys and sensing: Challenges and opportunities* (pp. 357–376). Oxford University Press.

Macnamara, J. (2019). Explicating listening in organization–public communication: Theory, practices, technologies. *International Journal of Communication, 13*, 5183–5204.

Macnamara, J. (2020). Corporate listening: Unlocking insights from VOC, VOE and VOS for mutual benefits. *Corporate Communications: An International Journal, 25,* 377–393.

McNall, L. A., Masuda, A. D., & Nicklin, J. M. (2009). Flexible work arrangements, job satisfaction, and turnover intentions: The mediating role of work-to-family enrichment. *Journal of Psychology, 144*(1), 61–81.

Microsoft. (2022, March 16). *Great expectations: Making hybrid work* work. https://www.microsoft.com/en-us/worklab/work-trend-index/great-expectations-making-hybrid-work-work

Parker, K., Menasce Horowitz, J., & Minkin, R. (2022, February 16). *Covid-19 pandemic continues to reshape work in America.* Pew Research Center. https://www.pewresearch.org/social-

trends/2022/02/16/covid-19-pandemic-continues-to-reshape-work-in-america/#:~:text=Looking%20to%20the%20future%2C%2060,said%20the%20same%20in%202020

Reed, K., Goolsby, J. R., & Johnston, M. K. (2014). Extracting meaning and relevance from work: The potential connection between the listening environment and employee's organizational identification and commitment. *International Journal of Business Communication, 53*, 326–342.

Reinikainen, H., Kari, J. T., & Luoma-Aho, V. (2020). Generation Z and organizational listening on social media. *Media and Communication, 8*(2), 185–196. https://doi.org/10.17645/mac.v8i2.2772

Yang, J. (2017). From voice behavior to creative performance: Supervisor listening as a boundary condition. *Academy of Management Proceedings*, 1, 17012.

Yip, J., & Fisher, C. M. (2022). Listening in organizations: A synthesis and future agenda. *Academy of Management Annals, 16*(2), 657–679.

# Increasing Representation in the Industrial-Organizational Psychology Curriculum

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In recent years, many disciplines in higher education have taken an active interest in promoting diversity, equity, and inclusion in their curriculum (e.g., Mintz, 2021). Traditionally, many fields have centered Western (e.g., Fuentes et al., 2021) and male (e.g., Harris et al., 2020) voices, which fail to reflect the multitude of voices in the field and the shifting demographics of the student body. In psychology, there have been efforts to decolonize the field (e.g., Pappas, 2022) through reimaging, restructuring, and revamping pedagogies and classroom dynamics (e.g., Tormala et al., 2022). In I-O psychology, considerable attention has been given to syllabus development and the representation of the scholars in course materials (e.g., Scott et al., 2022).

To support efforts to broaden the perspectives presented in course materials, lectures, and readings in I-O psychology, we introduce a crowd-sourced spreadsheet specifically tailored to I-O psychology topics (inspired by Wojcik, 2020). This will be a spreadsheet of publications in I-O psychology that are authored or coauthored by scholars from historically underrepresented backgrounds in academia and industry. The database will offer recommendations for published work that faculty could incorporate into their undergraduate and graduate courses.

The database takes a broad view of diversity, including race, ethnicity, culture, gender, disability, LGBTQ+, and intersecting identities, so that students may see role models who are similar to them making an impact in the field. For historically underrepresented students, elevating the important voices of authors from multiple backgrounds and identities may enhance their sense of inclusion and belonging. Further, equitable representation may expand the topics and worldviews that students learn about, ultimately boosting engagement and interest in the field for all students.

Please consider contributing to this resource to diversify the I-O psychology curriculum. We will moderate the spreadsheet and make it publicly available for faculty of undergraduate and graduate I-O psychology classes to diversify their course readings and to highlight the work of underrepresented scholars in their syllabi. Please use this form to submit papers: https://forms.gle/bXnk1r1i2TBjF4Rh6

Self-submissions are encouraged. Please also consider sharing the form with your I-O colleagues and students to reflect the membership of I-O psychology and to acknowledge the contributions of marginalized researchers and practitioners in the field. You can also suggest authors directly to Jessica Sim (jessica.sim@elmhurst.edu) so that we can add their publications to the database.

## References

Fuentes, M. A., Zelaya, D. G., & Madsen, J. W. (2021). Rethinking the course syllabus: Considerations for promoting equity, diversity, and inclusion. *Teaching of Psychology, 48*(1), 69–79. https://doi.org/10.1177/0098628320959979

Harris, J. K., Croston, M. A., Hutti, E. T., & Eyler, A. A. (2020). Diversify the syllabi: Underrepresentation

of female authors in college course readings. *PLoS One, 15*(10), e0239012.

Mintz, S. (2021). *Decolonizing the academy*. Inside Higher Ed. https://www.insidehighered.com/blogs/higher-ed-gamma/decolonizing-academy

Pappas, S. (2022). *Psychologists are working to diversify the undergrad curriculum and make classrooms more inclusive*. APA. https://www.apa.org/monitor/2022/11/inclusive-undergraduate-psychology

Scott, K. S. (Chair), Ahmad, A., Arun, N., Wilson, C. E., & Wilson, S. (2022). *Revolutionizing our syllabi: Dismantling and reimagining I-O curriculum* [Panel]. Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.

Tormala, T., Biddle, A., Martorell, G., & Berntsen, L. (2022). *Decolonizing introductory psychology*. STP. https://teachpsych.org/DecolonizingIntroPsych

Wojcik, E. (2020). *BIPOC psych papers spreadsheet.* https://sites.google.com/site/ericahwojcik/bipoc-psych-papers-spreadsheet

# I-O and HR: Does HR Know About Us?

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**Society for Human Resource Management**

In 2021, more than 1,400,000 professionals in the United States were working in human resources (HR) (U.S. BLS, 2022a, U.S. BLS, 2022b). This is no surprise given that HR is at the heart of organizations with responsibilities ranging across the entire employee life cycle (SHRM, 2023). As evident in the vision of SIOP (SIOP, 2023), the field of I-O focuses on creating improvements within organizations that benefit both the employee and employer. For most companies, HR is the department that controls the people operations that are relevant for these recommendations. As a result, it is vital to understand the relationship between HR and I-O so that the two groups can work together to improve organizations and the employee experience (Alonso et al., 2017).

## The Interconnected Relationship Between I-O and HR

HR professionals' awareness of I-O and the value of this science is important for the growth and success of the I-O field. First, as I-O psychology expands, additional jobs will be needed, and many of these jobs reside within HR departments. For example, as the value of HR data has expanded, so have people analytics functions (Ledet et al., 2020), which I-O psychologists often fill. Therefore, an awareness of I-O psychology will be useful for HR departments recruiting for such positions (i.e., understanding why I-O science fits) and for I-O psychologists searching for jobs (i.e., seeing I-O relevant search terms in job requisitions).

Second, HR professionals are often responsible for coordinating research conducted in organizations. Beyond coordination, the HR team often plays the role of gatekeeper in deciding if their employees will participate in the research study. Also, most of the I-O research results and evidence-based recommendations flow through the HR team before implementation. As a result, I-Os working in research and academia need to be able to build relationships with HR professionals—it is not just a practitioner issue.

Third, I-O practitioners typically need HR professionals' buy-in for interventions. From the inception of HR management (HRM), HR professionals played a critical role in executing these types of improvements, and this role has only expanded over time as HRM has become more strategic (Deadrick & Stone, 2014; Wright & Ulrich, 2017). Today, organizations' HR professionals are often the ones responsible for people-related decisions (Bauer et al., 2020), making their buy-in vital for the implementation of I-O interventions. Ultimately, HR professionals' awareness of I-O and the usefulness of this science for their practices may enhance their likelihood of buy-in.

Therefore, it is important for virtually all I-O psychologists to know how to communicate and partner effectively with HR professionals. But before crafting a plan for a better partnership, it is important to gauge HR professionals' current familiarity with I-O psychology.

## Relevant Previous Research

To our knowledge, only two research studies have directly investigated HR professionals' familiarity with I-O psychology. The first study conducted in 2012 found that only 15% of HR professionals were familiar with I-O psychology (Rose et al., 2013). The second study, conducted in 2013, found that 35% of HR professionals were familiar with I-O psychology (Rose et al., 2014). The sample size and sampling technique differed across the two studies, which may explain the differences in familiarity. A somewhat different

study by Nolan et al. (2014) considered the brand image of organizational consultants from different specialty areas. They found that people were less aware of I-O psychology than business administration or human resource management.

Much has changed in the 10 years since the first study was conducted. In this time, the job growth for I-O psychology was estimated to be 53%, making it the projected fastest growing occupation in the United States through 2022 (U.S. BLS, 2014, as cited in Cottrell et al., 2016). Given this, there is a need to revisit the issue of familiarity within the HR community and do so using industry-leading sampling methods to ensure the familiarity levels are an accurate representation of the HR community.

## The Present Study

Our team at the SHRM Research Institute embarked on a study of HR professionals to determine their familiarity with I-O psychology. The study aimed to answer four key research questions:

1. What is the overall familiarity level of I-O psychology within the HR community?
2. Are there key subgroups with higher or lower awareness?
3. What individual factors (e.g., education level) relate to greater awareness?
4. Where did HR professionals hear about I-O psychology?
5. What is the familiarity level of SIOP within the HR community?

### SHRM Voice of Work Research Panel

To answer the research questions, we fielded a survey using the SHRM Voice of Work Research Panel. This is a nationally representative panel of HR professionals in the United States derived from HR professionals with SHRM memberships. SHRM Research Institute created this panel in early 2022 in partnership with the National Opinion Research Council (NORC) at the University of Chicago. The processes and procedures for the SHRM Voice of Work Research Panel are similar to the industry-leading AmeriSpeak panel. These include

- thorough screening of panelists to clearly understand the panelists and verify they are actual HR professionals and eligible to respond to the surveys, and
- regular communication with panelists to ensure that the panelists are engaged and ready to accurately complete surveys.

These factors have led to consistently high response rates (typically 25% to 30%); as a result, the respondent samples tend to be similar to population characteristics.

What sets the SHRM Voice of Work Research Panel apart from other broader survey panels is the capability of collecting data from a representative sample of HR professionals in the US. Not only can the panel be drawn for representativeness (based on demographic factors and industries), but post-hoc weights can be implemented to ensure that the sample matches the population of HR professionals in the US. This process ensures high external validity that rivals other high-profile survey panels for other populations.

### Survey Procedure and Participants

A total of 5,999 HR professionals from the SHRM Voice of Work Research Panel ("panelists") were invited to complete a 20-minute survey. Of those invited, 1,516 panelists completed the survey between August 18, 2022, and August 25, 2022. As shown in Table 1, the final sample was predominately female

(76%) and White, non-Hispanic (65%). Participants ranged in from age 21 to 74. The sample was highly educated, with 46% holding a bachelor's degree and 19% holding a master's degree or higher. Small organizations (48%) were better represented than large (22%) or extra-large organizations (30%).

The data were weighted to represent the population of HR professionals in the United States. When compared to the U.S. population of HR professionals resulted in a margin of error of 3.9% (post weighting).

**Table 1**
*Sample Demographics (n = 1,516)*

|  | *N* | *%* |
|---|---|---|
| Gender |  |  |
| Female | 1152 | 76.3% |
| Male | 358 | 23.7% |
| Age |  |  |
| Age 18–34 | 495 | 32.8% |
| Age 35–49 | 571 | 37.8% |
| Age 50 or older | 444 | 29.4% |
| Race/ethnicity |  |  |
| White, non-Hispanic | 978 | 64.8% |
| Black, non-Hispanic | 206 | 13.6% |
| Hispanic | 204 | 13.5% |
| Asian or Pacific Islander, non-Hispanic | 46 | 3.0% |
| All other | 76 | 5.1% |
| Education |  |  |
| Less than a bachelor's degree | 533 | 35.3% |
| Bachelor's degree | 688 | 45.5% |
| Master's degree or higher | 289 | 19.1% |
| Organization size |  |  |
| Small | 724 | 47.9% |
| Large | 334 | 22.1% |
| Extra large | 452 | 30.0% |

***Familiarity Question***

To measure familiarity (the key study variable), we used a question which included alternative names of the field to ensure that respondents fully understood the question:

How familiar are you with industrial-organizational (I-O) psychology (sometimes called organizational psychology or work psychology)?

1. Never heard of it
2. Heard of it, but not familiar with it
3. Somewhat familiar
4. Very familiar

For the overall gauge of assessing familiarity, we added together the top two responses. We believe that this item and scoring approach (rather than just presenting "familiar" or "not familiar") can lead to more

accurate responses because it allows respondents to indicate when they are not familiar with something without stating that they are completely ignorant of it.
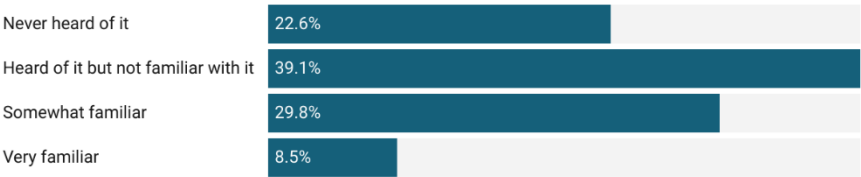
**Survey Findings**

*Familiarity With I-O Psychology*

Overall, we found that only **38% of HR professionals were familiar with I-O psychology**. Specifically, 23% had "never heard of it" (i.e., I-O psychology), 39% had "heard of it but not familiar with it," 30% were "somewhat familiar," and only 8% of HR professionals were "very familiar" with I-O psychology. Among the 8% of HR professionals who were "very familiar" with I-O psychology, 22% (*n* = 29) considered themselves I-O psychologists (although only about half of them had a master's degree or higher).

**Figure 1**

## Familiarity with I-O Psychology

How familiar are you with Industrial-Organizational (I-O) Psychology (sometimes called organizational psychology or work psychology)?

| | |
|---|---|
| Never heard of it | 22.6% |
| Heard of it but not familiar with it | 39.1% |
| Somewhat familiar | 29.8% |
| Very familiar | 8.5% |

*N = 1510*
Source: SHRM Research Institute • Created with Datawrapper

The results suggest that HR professionals have limited awareness of and familiarity with I-O psychology. What is more, 22% (*n* = 29) of HR professionals who are "very familiar" with I-O psychology considered themselves I-O psychologists. This means that awareness among HR professionals without I-O training is even lower than our overall results suggest.

Although overall familiarity levels do provide valuable insights, important questions remain. For example, are there key subgroups with higher or lower awareness? Table 2 shows that there are in fact subgroups with higher and lower awareness. In particular, familiarity is higher for men than women, and Black professionals have more awareness than White and Hispanic HR professionals, respectively. In addition, HR professionals from extra-large organizations have higher awareness than those in smaller organizations. However, education level showed the biggest differences—more highly educated professionals have greater awareness of I-O psychology.

**Table 2**
*Familiarity by Group*

| | Never heard of it | Heard of it, but not familiar | Somewhat familiar | Very familiar | **Total familiarity** |
|---|---|---|---|---|---|
| Gender | | | | | |
|    Female | 25.3% | 39.4% | 28.4% | 6.9% | **35.3%** |
|    Male | 13.7% | 38.0% | 34.6% | 13.7% | **48.3%** |
| Age | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Age 18–34 | 19.8% | 39.0% | 30.3% | 10.9% | **41.2%** |
| Age 35–49 | 23.4% | 39.0% | 28.7% | 8.9% | **37.6%** |
| Age 50 or older | 24.5% | 39.2% | 30.9% | 5.4% | **36.3%** |
| Education | | | | | |
| Less than a bachelor's degree | 34.0% | 43.7% | 19.1% | 3.2% | **22.3%** |
| Bachelor's degree | 21.3% | 38.0% | 32.0% | 8.7% | **40.7%** |
| Master's degree or higher | 4.9% | 33.3% | 44.4% | 17.4% | **61.8%** |
| Race/Ethnicity | | | | | |
| White, non-Hispanic | 21.3% | 41.1% | 29.1% | 8.5% | **37.6%** |
| Black, non-Hispanic | 15.0% | 38.3% | 37.9% | 8.7% | **46.6%** |
| Hispanic | 35.5% | 35.5% | 19.7% | 9.4% | **29.1%** |
| All other | 23.8% | 30.3% | 38.5% | 7.4% | **45.9%** |
| Organization size | | | | | |
| Small organization (2–499 employees) | 26.8% | 42.5% | 24.2% | 6.5% | **30.7%** |
| Large organization (500–4,999 employees) | 22.5% | 38.4% | 28.2% | 10.8% | **39.0%** |
| Extra-large organization (5,000+ employees) | 15.9% | 34.0% | 40.0% | 10.2% | **50.2%** |

Despite these subgroup differences, it is not clear to what extent these zero-order effects are simply due to the influence of other variables. To explore the data further, we conducted a five-stage hierarchical multiple regression to more fully investigate subgroup differences and determine if apparent differences are due to the effects of other variables. The regression included gender, age, education, race/ethnicity, and organization size. These variables were dummy coded and added to the model in five stages (see reference categories in Table 3).

**Table 3**
*Five-Stage Hierarchical Multiple Regression*

| Variable | Reference group |
|---|---|
| Age | 18–34 years old |
| Gender | Female |
| Education | Bachelor's degree |
| Race/Ethnicity | White, non-Hispanic |
| Organization size | Small (less than 500 employees) |

Gender was entered at Stage 1, age categories were entered at Stage 2, education levels were entered at Stage 3, race/ethnicity categories were entered at Stage 4, and organization size categories were entered at Stage 5. The results of the regression indicated that at Stage 1, gender contributed significantly to the regression model, $F_{(1, 1508)} = 33.68$, $p < .001$, and accounted for 2.2% of the variance in I-O familiarity. Introducing the age categories explained an additional .5% of variation in I-O familiarity, which was a significant addition, $F$ *change* $(2, 1505), = 4.15$, $p < .05$. Adding education level to the regression model explained an additional 8% of the variation in I-O familiarity, and this change in $R^2$ was also significant, $F$ change $(2, 1503) = 67.61$, $p < .001$. Next, race/ethnicity was added to the model and explained an additional .8% of the variation in I-O familiarity, and this change in $R^2$ was significant, $F$ change (3,

1500) = 4.74, $p < .01$. Last, organization size was added to the model and explained an additional .4% of variance in I-O familiarity, and this change $R^2$ was also significant, $F$ change (2, 1498) = 3.17, $p < .05$.

When all variables were included in Stage 5 of the regression model, neither gender nor age were significant predictors of I-O familiarity. Education level, race/ethnicity, and organization size were significant predictors of I-O familiarity. Together, the variables accounted for 12.0% of the variance in familiarity with I-O psychology, $F$ (10, 1499) = 20.35, $p < .001$.

**Table 4**

*Hierarchical Multiple Regression*

| Predictor | $B$ | $SE\ B$ | $\beta$ | $t$ | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|
| Step 1 | | | | | .022*** | .022*** |
| Female (0 = male) | -.312 | .054 | -.148 | -5.80*** | | |
| Step 2 | | | | | .027*** | .005* |
| Female (0 = male) | -.318 | .054 | -.151 | -5.93*** | | |
| Age 35–49 (0 = 18 to 34 years old) | .072 | .056 | .039 | 1.29 | | |
| Age 50 or older (0 = 18 to 34 years old) | -.166 | .058 | .087 | -2.86** | | |
| Step 3 | | | | | .107*** | .080*** |
| Female (0 = male) | -.046 | .057 | -.022 | -.816 | | |
| Age 35–49 (0 = 18 to 34 years old) | .002 | .054 | .001 | .033 | | |
| Age 50 or older (0 = 18 to 34 years old) | .002 | .058 | .001 | .032 | | |
| Less than a bachelor's degree (0 = bachelor's) | -.360 | .051 | -.191 | -6.99*** | | |
| Master's degree or higher (0 = bachelor's) | .445 | .062 | .195 | 7.13*** | | |
| Step 4 | | | | | .116*** | .008** |
| Female (0 = male) | -.045 | .057 | -.021 | -.789 | | |
| Age 35–49 (0 = 18 to 34 years old) | .017 | .054 | .009 | .318 | | |
| Age 50 or older (0 = 18 to 34 years old) | -.008 | .058 | -.004 | -.144 | | |
| Less than a bachelor's degree (0 = bachelor's) | -.367 | .051 | -.195 | -7.14*** | | |
| Master's degree or higher (0 = bachelor's) | .437 | .064 | .191 | 6.83*** | | |
| Black, non-Hispanic (0 = White, non-Hispanic) | -.102 | .067 | -.005 | -.184 | | |
| Hispanic (0 = White, non-Hispanic) | -.244 | .065 | -.093 | -3.73*** | | |
| All other (0 = White, non-Hispanic) | -.013 | .081 | -.004 | -.164 | | |
| Step 5 | | | | | .120*** | .004* |
| Female (0 = male) | -.039 | .057 | -.019 | -.695 | | |
| Age 35–49 (0 = 18 to 34 years old) | .015 | .054 | .008 | .281 | | |

| | | | | |
|---|---|---|---|---|
| Age 50 or older (0 = 18 to 34 years old) | -.017 | .058 | -.009 | -.303 |
| Less than a bachelor's degree (0 = bachelor's) | -.335 | .053 | -.179 | -6.31*** |
| Master's degree or higher (0 = bachelor's) | .424 | .064 | .186 | 6.62*** |
| Black, non-Hispanic (0 = White, non-Hispanic) | -.032 | .067 | -.012 | -.481 |
| Hispanic (0 = White, non-Hispanic) | -.244 | .065 | -.093 | -3.74** |
| Other (0 = White, non-Hispanic) | -.022 | .081 | -.007 | -.273 |
| Large organization (0 = small organization) | .099 | .057 | .046 | 1.74 |
| Extra-large organization (0 = small organization) | .127 | .054 | .065 | 2.34** |

Notes. *$p < .05$, ** $p < .01$ *** $p < .001$

### Key Differences in Familiarity

**Education level.** As the previous results show, education level is a key differentiator for familiarity. There was a significant difference in I-O familiarity between HR professionals with less than a bachelor's degree and HR professionals with a bachelor's degree, such that those with less than a bachelor's degree were less familiar ($\beta$ = -.18, $p < .001$). Further, there was a significant difference in I-O familiarity between HR professionals with a bachelor's degree and HR professionals with a master's degree or higher, such that those with a master's degree or higher were more familiar ($\beta$ = .19, $p < .001$). A closer look at the data shows that only 22% ($n$ = 119) of HR professionals with less than a bachelor's degree were somewhat or very familiar with I-O psychology compared to 41% ($n$ = 281) of HR professionals with a bachelor's degree, and compared to 62% ($n$ = 179) of those with a master's degree or higher. These results clearly show that I-O familiarity increases with education level, such that HR professionals who are more educated are also more familiar.

**Race/ethnicity.** There was also a significant difference in I-O familiarity between White HR professionals and Hispanic HR professionals, such that Hispanic professionals were less familiar than White professionals ($\beta$ = -.09, $p < .001$). Specifically, 38% ($n$ = 368) of White HR professionals were somewhat or very familiar with I-O psychology as compared to 29% ($n$ = 59) of Hispanic HR professionals. Also, it is relevant to note that Black HR professionals have higher awareness than other groups (47%; $n$ = 96), although this difference disappears when accounting for other factors. Previous research on I-O familiarity did not examine individual characteristics like race and ethnicity, so this finding suggests that familiarity does differ by race and ethnicity and should be considered further. In particular, if we can determine *why* Hispanic HR professionals lack familiarity with I-O psychology, we will be able to effectively address it so they can find out about the useful conclusions and interventions from I-O psychology.

**Organization size.** Last, organization size was also a key differentiator for familiarity. We found a significant difference in I-O familiarity between HR professionals from extra-large organizations (5,000+ employees) and those from small organizations (less than 500 employees). HR professionals from extra-large organizations were more familiar with I-O psychology than those from small organizations ($\beta$ = .07, $p < .02$). In particular, 50% ($n$ = 227) of HR professionals from extra-large organizations were familiar with I-O psychology, whereas only 31% ($n$ = 222) of HR professionals who work for small organizations were familiar with I-O psychology.

This is a cause for concern considering 99.9% of U.S. businesses employ fewer than 500 employees, and combined, these small businesses employ over 61 million people (U.S. Small Business Administration Office of Advocacy, 2021). Although concerning, it isn't much of a surprise as I-O psychologists have been accused of neglecting small businesses for years (Aguinis, 2023; Zickar, 2004). Coupled with our findings, this may suggest that when I-O psychologists overlook small businesses in research and practice, it can have downstream impacts on familiarity level. This lack of familiarity can further perpetuate this issue of organization size, as HR professionals working for small organizations may be reluctant to partner with I-O psychologists.
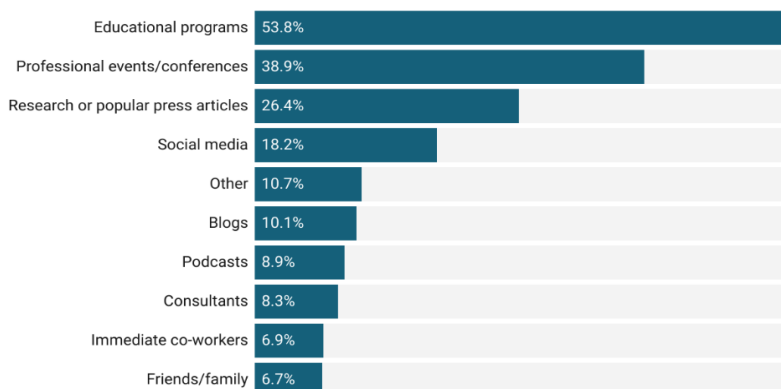
*Channels of Familiarity*

Given the limited familiarity with I-O psychology, it is important to understand how HR professionals are learning about I-O psychology (Rogelberg et al., 2022). To investigate this issue, HR professionals who indicated they were familiar with I-O psychology were asked, "Where did you hear about I-O psychology?" and instructed to select all channels that contributed to their familiarity with I-O. Results showed that many HR professionals heard about I-O psychology in educational environments, specifically 54% from educational programs they attended and 39% at professional events/conferences. The results also revealed that just over 1 in 4 (26%) HR professionals heard about I-O from research or popular press articles, 18% from social media (e.g., LinkedIn), 10% from blogs, and 9% from podcasts. Few HR professionals heard about I-O psychology from people in their network, such as consultants (8%), immediate coworkers (7%), or friends and family (7%).

In sum, HR professionals are mostly hearing about I-O in educational environments. These results provide additional context and support for the role of education in familiarity. As more organizations embrace skilled credentials, an increasing number of HR professionals (and other workers) will be in roles that may have previously required a 4-year degree. Unfortunately, this group may have less exposure to I-O because they never attended traditional educational programs. We may need to re-evaluate the channels used to amplify I-O psychology so those without a traditional degree can also benefit from I-O when tackling workplace issues.

**Figure 2**

## Channels of Familiarity

Where did you hear about I-O psychology? (Select all that apply)



| Channel | Percent |
| --- | --- |
| Educational programs | 53.8% |
| Professional events/conferences | 38.9% |
| Research or popular press articles | 26.4% |
| Social media | 18.2% |
| Other | 10.7% |
| Blogs | 10.1% |
| Podcasts | 8.9% |
| Consultants | 8.3% |
| Immediate co-workers | 6.9% |
| Friends/family | 6.7% |

*Percent of cases (N = 1168)*
Source: SHRM Research Institute • Created with Datawrapper

*Familiarity With SIOP*

In addition to the questions about familiarity with the field of I-O psychology, we asked, "How familiar are you with the Society for Industrial and Organizational Psychology (SIOP) as an organization?" We found that only 9% of HR professionals were familiar with SIOP. Specifically, 20% had "heard of it but were not familiar with it," 6% were "somewhat familiar," and only 3% were "very familiar." The vast majority had "never heard of it" (71%).

SIOP can be a valuable resource for HR professionals, yet nearly 3 in 4 do not even know it exists. If SIOP is an organization that is looking to support the field internally, then awareness of the organization from non-I-O psychologists is not important. However, if SIOP seeks to be an advocate of the issues and the individuals within the field and to elevate them in the eyes of the public, then more marketing of the organization is warranted.

## Summary and Conclusions

Overall, these results show that there is limited awareness of the field of I-O psychology by HR professionals in the United States. Specifically, we estimate that 38% of HR professionals are familiar with I-O psychology. Although well under half of HR professionals, it is marginally higher than previous estimates from close to a decade ago (i.e., 35% from Rose et al., 2014), which implies that some, but not much, progress has been made. Further analyses showed that education is the main driver of awareness, and HR professionals tended to cite college courses as the key source of their understanding of I-O psychology. Because of this, new interventions to improve the visibility of I-O psychology in the view of HR professionals should focus on areas other than colleges and higher education. Efforts should be made to raise the image I-O psychology in other ways that include HR professionals with limited to no college experience. As we echo the call from many others (e.g., Rogelberg et al., 2022), we must consider all of the ways that we can bring I-O psychology science and evidence-based practices to the public.

This finding regarding the role of education in awareness is of particular interest given the previous research on this issue and subsequent call to action (Rose et al., 2014). After finding low awareness of and familiarity with I-O among business/HR professionals and academics, Rose and colleagues (2014) recommended that the I-O community "maintain and amplify education outreach programs" to improve student awareness of I-O (p. 161). They argued that with time, this would increase awareness among the other groups as students assume roles in business and academia. Now, nearly 10 years later, it is possible that approach may have had unintended consequences, as there are large discrepancies in familiarity between education levels.

In a later article, we will move from the question of awareness of I-O in the HR community to what they think about I-O. Is there a positive view of I-O psychology? Are there areas within HR where I-O is viewed as particularly useful (or other areas where I-O is not relevant)? These are important additional questions to investigate as we seek to elevate I-O psychology. We will also address the issues of what to do about these findings.

## References

Aguinis, H. (2023). 2022 presidential address: This is our celebration. *Academy of Management Review, 48* (2), 1–6. https://doi.org/10.5465/amr.2022.0350

Alonso, A., Kurtessis, J. N., & Waters, S. D. (2017). Enough already! HR is rising (with I-O). *Industrial and Organizational Psychology: Perspectives on Science and Practice, 10*(1)*,* 32–38. https://doi.org/10.1017/iop.2016.101

Cottrell, J. M., Lobene, E. V., Martin, N. R., & Boyce, A. S. (2016). A look in the mirror: The mastery-oriented I-O psychologist. *The Industrial-Organizational Psychologist, 53(*4), 129–138.

Ledet, E., McNulty, K., Morales, D., & Shandell, M. (2020, Oct 2). *How to be great at people analytics*. McKinsey Quarterly. https://www.mckinsey.com/business-functions/organization/our-insights/how-to-be-great-at-people-analytics

Nolan, K. P., Islam, S., & Quartarone, M. (2014). The influence of vocational training on the brand images of organizational consultants. *The Psychologist-Manager Journal, 17*(4), 245–278. https://doi.org/10.1037/mgr0000022

Rogelberg, S. G., King, E. B., & Alonso, A. (2022). How we can bring I-O psychology science and evidence-based practices to the public. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 15,* 259–272. https://doi.org/10.1017/iop.2021.142

Rose, M., Drogan, O., Spencer, E., Rupprecht, E., Singla, N., McCune, E., & Rotolo, C. (2014). I-O psychology and SIOP brand awareness among business professionals, HR professionals, faculty members, and college students. *Industrial and Organizational Psychology: Perspectives on Science and Practice, 52*(1), 154–162.

Rose, M., McCune, E., Spencer, E. L., Rupprecht, E. A., & Drogan, O. (2013). Increasing I-O and SIOP brand awareness among business and HR professionals: What's the baseline? *The Industrial-Organizational Psychologist, 50*, 47–56.

Society for Human Resource Management (2023). *Human Resource Management.* https://www.shrm.org/resourcesandtools/tools-and-samples/hr-glossary/pages/human-resource-management-hrm.aspx

Society for Industrial and Organizational Psychology. (2023). *SIOP Vision, Mission, Values, and Goals.* https://www.siop.org/About-SIOP/Mission

U.S. Bureau of Labor Statistics (2022a, September 8). Human resources managers. In *Occupational outlook handbook*. https://www.bls.gov/ooh/management/human-resources-managers.htm

U.S. Bureau of Labor Statistics (2022b, September 8). Human resources specialist. In *Occupational outlook handbook*. https://www.bls.gov/ooh/business-and-financial/human-resources-specialists.htm#:~:text=5%25-,Employment%20of%20human%20resources%20specialists%20is%20projected%20to%20grow%208,on%20average%2C%20over%20the%20decade

U.S. Small Business Administration Office of Advocacy (2021). *2021 Small Business Profile*. https://cdn.advocacy.sba.gov/wp-content/uploads/2021/08/30143723/Small-Business-Economic-Profile-US.pdf

Zickar, M. J. (2004). An analysis of industrial-organizational psychology's indifference to labor unions in the United States. *Human Relations*, *57*(2), 145–167. https://doi.org/10.1177/0018726704042925

# New Guidelines for Technology-Based Assessment

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Technology has become an essential part of assessment throughout the testing lifecycle. Test/item design, development, delivery, scoring, reporting, data storage, evaluation, and maintenance are all heavily technology dependent. This is true in the realms of workplace, educational, clinical, and professional licensing certification testing.

The International Test Commission (ITC) and the Association of Test Publishers (ATP) released in November 2022 a comprehensive set of guidelines specifically for technology-based assessment. The *Guidelines for Technology-Based Assessment* are the result of a multiyear collaboration by the ATP and ITC to fill an important need: to supply guidance and best practices for the design, delivery, scoring, and use of digital assessments while ensuring the validity, fairness, accessibility, security, and privacy of such assessments. Although other testing standards and guideline documents are available, these *new Guidelines* are unique in their comprehensive discussion of issues regarding the use of technology in assessment.

*Note:* SIOP's January 2023 publication of *Considerations and Recommendations for the Validation and Use of AI-Based Assessments for Employee Selection* ([SIOP AI Considerations](#)) is an excellent complement to the ITC/ATP Guidelines.

## Background

Technology applications in assessment have become commonplace, such as technology-enhanced items, internet-based testing, remote online proctoring, data forensics, and biometric measures to authenticate examinees. More recent applications include game-based and gamified assessment, mining "big data" bases, digital social networks, and use of artificial intelligence and machine learning in assessment, all of which are becoming leading-edge practices.

Yet, as technology advances assessment practices, fundamental measurement concepts and concerns remain. It is critical to ensure that the use of technology in testing adds value without introducing irrelevant variance in scores or unintended consequences. In other words, technology-based assessments (TBAs) must remain valid for their intended purposes, yielding reliable and meaningful measurement in a manner that minimizes bias and ensures fairness. Further, as these new and enhanced technologies increase the global reach of assessment programs, accessibility and cross-cultural assessment and adaptation considerations become increasingly important.

The *Guidelines* were developed by an expert team of over 100 authors, technical reviewers, and advisers representing a range of practice areas and regions around the globe.

## Content

The *Guidelines* document comprises four parts. Part I describes the background of, purpose for, and approach to developing the *Guidelines*, and outlines key related documents and references. In Part II, foundational concepts in measurement are discussed, such as validity, fairness, reliability and the need

to manage against threats to measurement that may be introduced in technology-based assessments. Part III contains specific guidelines that are divided into 11 chapters. Each chapter begins with an introduction and discussion of important considerations for the relevant topic, followed by guideline statements. In most cases the guidelines are accompanied by commentary to explain and illustrate their relevance and application. Finally, Part IV provides a discussion of emerging applications of technology in assessment that are rapidly evolving and for which the ATP and ITC expect best practices and guidelines will be developed in the future.

**Guideline Chapters**

The 11 chapters comprising the *Guidelines* are outlined below to provide an overview of their breadth:

1. **Test Development:** Planning for technology-based assessments; technology-enhanced items; gamification, game-based assessment, and virtual performance assessments; universal test design; integrating assessment with instruction; item authoring.
2. **Test Design and Assembly**: Linear test design; adaptive test design.
3. **Test Delivery Environments**: Web-based delivery; offline, local, and mobile delivery; locked-down browsers; interoperability; test disruptions.
4. **Scoring**: Automated scoring of selected responses; automated scoring of constructed responses; technology-assisted human scoring; scoring in the event of technology disruption and incomplete assessments; using item response time in scoring.
5. **Digitally Based Results Reporting**: Results reporting; quality control in score reporting; maintaining confidentiality of score reporting.
6. **Data Management**: Data storage; data maintenance, integrity, and security; integrating assessment data with learning systems.
7. **Psychometric and Technical Quality:** Score precision, comparability, and equating; measuring change and growth; validation of technology-based assessments.
8. **Test Security**: Technology-enabled test security.
9. **Data Privacy:** Privacy in technology-based assessment.
10. **Fairness and Accessibility**: Accessibility; equity issues in technology-based assessment.
11. **Global Testing Considerations**: Translation and adaptation; availability of technology resources; candidate preparation, practice, and orientation to technology.

As a review of these chapter titles indicates, the scope of the *Guidelines* is incredibly broad and should be of interest to those developing, selecting, evaluating, and conducting research on educational and psychological assessments.

**To obtain a copy of the *Guidelines*.** The *Guidelines for Technology-Based Assessment* are available in electronic format at no charge on the [ATP](ATP) and [ITC](ITC) websites.

**Make Plans to Attend the 2023 SIOP Consortia!**

**SIOP Consortia Committee**

SIOP is committed to supporting the careers of I-Os at all career levels of the membership base. The consortia tracks are designed to support the career growth of both master's and doctoral students, early career faculty, and early career practitioners. With content ranging from improving reviewing skills, to navigating the job search, and improving leadership skills, the consortia offerings are sure to have a positive impact on your career trajectory. The Master's Consortium will continue to be fully virtual and occur in live mini sessions virtually in the weeks leading up to the conference. The Doctoral, Early Career Faculty, and Early Career Practitioner Consortia will be in-person on Wednesday, April 19 at the Hynes Convention Center in Boston.

We are excited once again to see the consortia as a place for professional development and networking with colleagues. We hope you consider adding the consortia to your conference registration.  Please continue reading to learn more about what each consortium is offering!

*Please visit the [SIOP's consortia web page](#) for more details on all sessions referenced below.*

**Calling All Master's Students!**

Are you interested in hitting the ground running when you complete your master's degree? The 2023 Master's Consortium is an event curated to enhance professional development and provide networking opportunities for I-O master's students preparing to enter the workforce.

A master's in I-O prepares you to join today's workforce with a better understanding of how people work, how to measure workplace outcomes, and how to use data to make business decisions. With this in mind, this preconference consortium for master's students is designed to be a valuable tool in your toolbox.

You'll pick up best practices for interviewing and salary negotiation, begin to build your invaluable SIOP network through meet-and-greet exercises, and learn hints, tips, and advice for jump-starting your career from keynote presentations and discussions with established professionals. This year's program includes presenters representing specializations in internal and external consulting, government, and a focus in assessments.

**The consortium will be virtual, occurring in 2-hour sessions from 1–3pm EDT on April 4, 6, 11, and 13.**

**Deadline for registration is Friday, March 31**. We encourage any students with questions to reach out to the consortium cochairs, **Brandon Riggs** ([briggs@perceptyx.com](mailto:briggs@perceptyx.com)) and **Beth Adams** ([beth.adams@ankura.com](mailto:beth.adams@ankura.com)). We hope to see you there!

**Calling All Early Career Faculty!**

The Early Career Faculty Consortium invites current and future junior faculty in departments of psychology and management to participate in career-focused activities and sessions. The program will feature an opportunity for **networking** with junior faculty members from a diverse array of institutions as well as senior faculty presenters who will share their respective research and teaching paths and stories about how they have navigated their academic career. For the first time in 3 years, ECFC is returning to a fully in-person format with opportunities to network over coffee and lunch.

The 2023 Early Career Faculty Consortium will include **Teaching Undergraduate and Graduate Courses**, **Surviving and Thriving Through the Promotion and Tenure Process** with recently tenured panelists, and **Research and Pipeline Tips & Tricks**. Additionally, this year's consortium will feature a **Reviewer Bootcamp** hosted by editors and associate editors of the *Journal of Applied Psychology* to help build reviewing skills. Panelists include outstanding teachers and scholars, including SIOP Fellows and recipients of the SIOP Distinguished Teaching Contributions Award as well as many other awards.

Because the success of the Early Career Faculty Consortium comes from interactive sessions with invited speakers, attendees will have the opportunity to prepare and submit questions prior to attending. Many attendees choose to attend the consortium multiple times to capitalize on new programming and information presented in subsequent years. If you (a) are a PhD student who has successfully proposed your dissertation, (b) are seeking or have accepted an academic position, or (c) are in your first 6 years as a faculty member or other academic position (e.g., postdoc), then you are eligible to participate.

Note that in order to prepare for the *JAP* Reviewer Bootcamp, a manuscript will be sent in advance for participants to review. We look forward to seeing you there!

### Early Career Practitioner Consortium

- *Are you a high-potential I-O practitioner with less than 5 years of career experience looking to propel your career?*
- *Are you interested in receiving mentoring and coaching from industry leaders?*
- *Do you want to build relationships with a cohort of other I-O practitioners at a similar career level?*

Attend SIOP's Early Career Practitioner Consortium!

### What is it?

ECPC is a 1-day development program enabling participants to enhance their agility as practitioners, clarify next career steps, and expand their network. Participation is by application. Cost to attend is $175 and includes Hogan/SHL Assessments.

### Who can attend?

Capped at 35 attendees, ECPC is geared toward current I-O practitioners pursuing nonacademic careers, with no more than 5 years of work experience after their master's degree or PhD. Participation in this experience is by selection and requires completing an application. Individuals currently pursuing I-O graduate education while working in an I-O-related field are also invited to apply to attend.

### What is the experience like?

ECPC was crafted to mirror leadership development programs typically reserved for senior leaders. **The in-person, full-day event will be held prior to the annual conference on April 19** and will offer opportunities to:

- Gain insight into your unique strengths and opportunities for improvement via Hogan and SHL assessment results
- Learn from distinguished I-O professionals and executives like SIOP Past President **Nancy Tippins**
- Receive coaching to support you in navigating work challenges and taking the next steps in your career

- Build relationships with fellow early career practitioners as you work in groups to develop new skills
- Better plugged into SIOP and broaden your general I-O network as you interact with other consortia attendees

### *Who are the speakers, coaches, and mentors?*

ECPC speakers, coaches, and mentors have excelled in their career and are interested in supporting you to do the same. This year's speakers, coaches, and mentors include

- **Allan Church**, PhD: Cofounder and Managing Partner at Maestro Consulting LLC/Adjunct at Teachers College Columba (Former SVP Global Talent Management at PepsiCo)
- **Brittany Marcus-Blank**, PhD: Global Talent Management at Johnson and Johnson
- **Dara Drescher**, MA: Global Operations Learning & Development at Amazon
- **Jodi Himelright**, PhD: Founder and Principal Consultant at Excelis Leadership Consulting, Inc.
- Nancy Tippins, PhD: Principal at The Nancy Tippins Group (Former SIOP President - 2001-2002)
- **Rawn Santiago**, PhD: Senior Consultant at YSC
- **Sertrice Grice**, MS: Chief Consulting Officer & Co-Owner at Mattingly Solutions
- **Stacey Levine**, PhD: Senior Manager People Science at Glint
- **Susannah Yule**, MS: Managing Director North America at YSC
- Tomas Chamorro-Premuzic, PhD: Chief Innovation Officer at Manpower Group/Cofounder– Deeper Signals

### *Why should I attend?*

ECPC attendees will walk away with greater self-awareness, improved I-O-related skills, tailored coaching and mentorship from industry experts, guidance to propel career trajectory, and deeper connections to SIOP alongside the I-O practitioner community.

### *How do I apply?*

Apply using the link in ECPC section on the consortia website. Applications are accepted on a rolling basis. **The deadline to apply is EOD Friday, March 31**. All accepted applicants will be required to pay associated fees no later than Monday, April 3.

### *What dates do I need to know?*

- Friday, March 31, 11:59pm ET: ECPC Application Deadline
- Monday, April 10, 2:00pm–3:00pm ET: ECPC Launch Event (virtual)
- Wednesday, April 19, 8:30am–5:00pm ET: 2023 ECPC (on-site event during the 2023 SIOP Annual Conference)

### Doctoral Students

The SIOP 2023 Lee Hakel Doctoral Consortium will be fully in-person on Wednesday, April 19. Registration for this consortium closed March 15.

For further information, please visit the [consortia webpage](#) or contact ECPC Cochairs **Nchopia Nwokoma** (Nchopia.Nwokoma@kornferry.com) or **Jan Harbaugh** (Jan.Harbaugh@shl.com).

**SIOP Statement on Potential Disability Discrimination When Using Artificial Intelligence**

A *TIP* article from the September 2022 issue reported on SIOP's efforts to influence national policy in the United States. A recent example of such efforts is the official statement from SIOP commenting on the joint initiative by the U.S. Department of Justice (DOJ) and Equal Employment Opportunity Commission (EEOC) to combat discrimination faced by individuals with disabilities (IWDs) when organizational recruitment and selection processes use artificial intelligence (AI).

The statement focuses on three threats of AI-based technologies for applicants with disabilities:
- threat regarding equitable access to hiring opportunities;
- threat regarding disparate impact against individuals with disabilities;
- threat regarding organizations' ability to access protected information about applicants without their consent.

SIOP supports the U.S. DOJ and EEOC in efforts to raise awareness of these potential threats and to take a proactive stance in preventing and combating discrimination against IWDs during hiring. The full statement is available here. The statement was drafted by members of SIOP's Disability Inclusion and Accessibility Committee (DIAC), reviewed by additional SIOP leadership, and revised for publication.

Former DIAC member and Past President **Fred Oswald** provided valuable input into the position statement, given his research, practice, and policy involvement in AI-based employment testing. He is chair of the Board on Human-Systems Integration (BOHSI) at the National Academies and a member of the National AI Advisory Committee (NAIAC). Commenting on the SIOP statement, Fred notes,

> Providing fair test accommodations for job applicants with disabilities isn't just the right thing for organizations to do; it is an important part of a broader organizational strategy for improving organizational culture, teamwork, customer service, and performance. The SIOP statement sends a strong and timely message, that issues of fair testing, adverse impact, and data privacy are critically important, yet perhaps even more challenging, for job applicants in today's era of AI-based employment testing.

DIAC is an ad hoc committee originally formed in 2020 and is part of the SIOP Diversity and Inclusion Portfolio, led by Portfolio Officer **Derek Avery**. DIAC has worked closely with the Conference Committee to increase accessibility of the SIOP conferences for all attendees, has started a mentoring program, and offered online learning opportunities for SIOP members on issues related to disability. The committee is composed of scientists and practitioners, US and international members, people with a lived experience of a disability and aspiring allies, and people at different career stages. For more information about DIAC, please contact Chairperson **Christy Nittrouer** at cnittrou@ttu.edu.

**SIOP Membership Demographics Dashboard Updated to Version 3.0!**

To provide enduring support of SIOP's strategic goal #2, to build a diverse and inclusive SIOP, we are delighted to share that version 3.0 of the SIOP Membership Demographics Dashboard is now available! SIOP members with a current and active membership can access the dashboard by logging into their account and finding the *Demographics* link under the *Membership* menu of SIOP.org.

In 2019, the SIOP Membership Committee created the Membership Analytics Subcommittee (MAS) in order to analyze and visualize data from membership surveys and member profiles, and drive data initiatives that involve regular member reports, and strategic analyses for the SIOP staff, Executive Board, and members. The subcommittee fulfills membership data analysis requests from SIOP members, uses data to drive decision making to improve the membership experience, and visualizes summaries of demographic data for the broader SIOP community.

In 2021, members of the MAS identified the importance of advancing SIOP's strategic goal #2, specifically the need for better data infrastructure, higher visibility into membership diversity, and accessible digital resources for members. To address these needs, we developed the first version of a user-friendly and self-serve dashboard that allowed members to view aggregate demographic data on a variety of variables including gender, member type, highest degree earned, sector of employment, location, and field of study (e.g., I-O/business psychology, organizational behavior, human resources).

Last year, we launched version 2.0 of the dashboard based on feedback from members, which updated the data cleaning pipeline and added additional views and insights. The new tabs allowed members to track changes in gender composition, work sector, degree, membership type, and location over time (from 2017 through present).

This year, we continue to update the dashboard with even more views and insights to make this resource more useful for members! Version 3.0 of the dashboard now includes a new tab with insights on members who have volunteered on SIOP's committees and a new tab with insights on annual conference registrations.

We understand the appetite for data among SIOP members and strive to continuously update the dashboard, but **we need your help!** As you interact with the dashboard, you may notice that many important demographic variables, such as gender, have a large amount of missing data. This data gap impedes our ability to present accurate insights on SIOP membership diversity. **To help remedy this, please ensure that you have provided your most up-to-date demographic information in your SIOP profile.** To do so, please log into your account at SIOP.org, visit your account page, and select the *Edit My Demographic Information* link to fill in any blanks or make updates. Also, please spread the word to your friends and colleagues!

Do you have SIOP membership data requests for your committee or research efforts? Submit your data analysis request here. To learn more about the request process and the types of membership information that are available, please review SIOP's Membership Data Governance Policy.

Note: Due to a high proportion of missing data (almost 50%), the SIOP team is currently finalizing the visualizations surrounding race and ethnicity. We hope to be able to add these to the dashboard within the next few months.

**Your SIOP Awards: Know the Opportunities**

**Cindy McCauley**
**SIOP Awards Strategy and Operations Subcommittee Chair**

I have been involved in the SIOP Awards Committee in various capacities since 2016. As I reflect on my experience with the committee, I want to highlight four things that stand out to me—and then help *you* think about how to get more involved in the award nomination process.

1. **With the support of the SIOP Foundation, SIOP has an incredible awards program.** The Awards Committee oversees 31 awards—a mixture of distinguished and career awards, best paper and achievement awards, research grants, and scholarships designed for SIOP members at a variety of career stages. In addition, SIOP recognizes conference best papers and posters.

2. **The review process is designed to be thorough and fair, and reviewers take their job seriously.** Every award has its own subcommittee of reviewers, each with a chair who is invited to take the role because of outstanding service on the subcommittee in previous years or because of expertise related to the focus of the award and a stellar reputation. Each subcommittee has specific criteria for membership to ensure that people with relevant expertise and experience are reviewing nominations. We have a clear Conflict of Interest policy that delineates when members have to recuse themselves from the subcommittee because of their relationship with one of the nominees. Each award has a set of criteria on which subcommittee members independently rate the nominees. Average ratings and written comments are reviewed, and a decision about who to recommend for the award is made by the entire subcommittee. The Awards Chairs and Chairs-in-Training review each subcommittee's report, raising questions and seeking more information when the subcommittee has not clearly documented their process or the rationale for their recommendation. An award will not be given if a subcommittee does not recommend any of the nominees as deserving of the award. Do subcommittees always totally agree on who they should recommend for an award? Of course not. But from my perspective, volunteers have worked hard to make recommendations that everyone feels they can support.

3. **The Awards Committee is committed to continuous improvement**. In 2018, a special task force conducted a thorough review of the SIOP awards program and identified a number of areas for improvement, including marketing of awards, donor contracts, and strategic alignment with SIOP goals. With Executive Committee approval, an additional subcommittee (the Awards Strategy and Operations Subcommittee) was created to implement the recommendations of the task force. One important aspect of the work of this new subcommittee was formal evaluations of each category of awards. Many thanks to the graduate students (and their advisors) at Middle Tennessee State and Northern Illinois University for their work in conducting these evaluations and identifying strengths and potential improvements in the awards program.

4. **Not enough members take advantage of the awards program.** With the exception of the SIOP Small Grants Program and the SIOP Graduate Scholarships, it is rare for the number of nominees for an award to reach double digits. This year, 23 of the awards had five or fewer nominees, including zero nominees for two of the awards (even after nominations for these awards were open for an extra month).

Certainly, one factor in the low nomination numbers is lack of knowledge about what is available, so let me take you on an awards program tour. You can find more detailed information about each award [here](#) on the SIOP website. **The window for submitting a nomination is April through June**.

### Distinguished and Career Awards

These awards are announced at the opening session of the SIOP conference. They are a big deal. Five of the awards—**Professional Contributions**, **Scientific Contributions**, **Service Contributions**, **Teaching Contributions,** and the **Cascio Scientist–Practitioner Award**—are lifetime achievement awards. Two are **Early Career Contributions** awards. Another is for outstanding humanitarian contributions related to I-O psychology (**SIOP Humanitarian Award**). And every other year, the $50,000 **Dunnette Prize** is awarded to an individual whose work has significantly expanded knowledge of the causal significance of individual differences.

- Individuals rarely nominate themselves for these awards (we are a humble bunch), thus we rely heavily on SIOP members taking the initiative to nominate others. This is an opportunity for you to honor someone who has been influential in your own career, whose work you admire, or whom you want to hold up as a role model. What could be more satisfying than that? And my sense is that individuals nominated for these awards are honored just to have been nominated by their peers.
- What has surprised me is that we receive the fewest nominations for the Service Contributions Award and the SIOP Humanitarian Award. Surely we do not see these awards as less important or that outstanding service to SIOP or humanitarian efforts are rare among our colleagues. If you are reading this and someone comes immediately to mind who would be deserving of one of these awards, commit right now to nominate him or her!
- The work of putting together a nomination package for one of these awards involves writing a letter of nomination, getting a comprehensive CV from the nominee, and recruiting up to five others to write letters of support.
- We want demographically diverse candidates for all of our awards; however, the group of nominees for the distinguished awards are often the least diverse. You have the power to change that!

### Achievement Awards for Publications

These awards recognize outstanding written works. Two awards are for publications in a *refereed journal*: The **William A. Owens Scholarly Achievement Award** for the best publication in I-O psychology in the last calendar year and the **Schmidt-Hunter Meta-Analysis Award** for the meta-analysis publication in the last 3 years that best advances I-O psychology. Two awards do not limit the publication to journal articles: The **Joyce and Robert Hogan Award for Personality and Work Performance** recognizes the best paper or chapter that demonstrates innovation in applied personality research. The **Jeanneret Award for Excellence in the Study of Individual or Group Assessment** recognizes a work (article, report, chapter, or paper) judged to have the highest potential to further the understanding of individual or group assessment, especially when such assessment supports a diverse workplace. The **S. Rains Wallace Dissertation Award** recognizes the best dissertation research in the I-O field. Keep in mind that the nomination package for this award requires a summary of the research. Reviewers are not expected to read the entire dissertations of multiple nominees.

- Note that these awards vary in terms of type of publication, time period during which the publication appeared, and topical focus. Read the requirements carefully!

- Some nominations for these awards come from authors and some from others. I encourage authors to not be shy about nominating their own work. At the same time, nominating someone else's publication that you were amazed by is important, too. Many authors may be reluctant to nominate their own work or may not fully realize the positive impact of their work. I worry that if we rely on self-nominations, we might be missing papers deserving of these awards. A number of years ago, I nominated an article for the Owens award of which I was totally in awe. I did not know the authors personally, but when the article won the award, it was satisfying to know that this publication was getting recognized and that I had a hand in it.
- The nomination package for these awards are the easiest to assemble, typically involving just the publication itself and a letter of nomination.

## Achievement Awards for Practice

These awards recognize outstanding applications of I-O psychology. The **M. Scott Myers Award for Applied Research in the Workplace** recognizes a project or product that represents an outstanding example of the practice of I-O psychology. The **Wiley Award for Excellence in Survey Research** recognizes excellence and innovation in the design of survey research methods or techniques that improve organizational effectiveness. The **Raymond A. Katzell Award in I-O Psychology** recognizes a SIOP member who has shown the general public the importance of work done by I-O psychology for addressing social issues.

- Nominations for the Wiley and Myers awards are almost always self-nominations by project teams. Unlike publications, this work is often not widely known about in the field; thus, these awards are an important way of making examples of best practices more visible.
- Nominating your work for the Wiley or Myers awards also has the potential benefit of making your work more visible within your own organization! Only one member of the project team has to be a SIOP member.
- The Katzell award is another one of those awards for which we regularly get few nominations. Like the distinguished awards, people don't typically self-nominate for the award. If you know someone who has been successful at translating their work for the general public or using I-O-based knowledge to impact society's well-being, then please consider nominating them or helping them put together a nomination package.

## Research Grants for SIOP Members

The **SIOP Small Grant Program** provides several grants to support I-O research in a wide variety of topic areas with an emphasis on those that represent a cooperative effort between academics and practitioners. Major donors to the SIOP Foundation have also designated funds for grants to support research in a particular domain. We only get a handful of proposals each year submitted for these grant monies!

- The **Douglas W. Bray and Ann Howard Research Grant** ($10,000) supports research on assessment center methods and on the development of managers and leaders.
- The **Sidney A. Fine Grant for Research on Job Analysis** ($7,500) supports research on analytic strategies to study jobs, especially as the nature of job content and organizational structures change.
- The **SIOP International Research and Collaboration (IRC) Small Grant** ($3,500) supports global and cross-cultural research conducted by international research teams.
- The **Zedeck-Jacobs Adverse Impact Reduction Grant** ($2,000) supports research that examines new approaches in the study of adverse impact and its reduction.

My one piece of advice is to pay close attention to the required content and format of grant proposals. In our efforts to be fair, we will not even review proposals that do not follow the guidelines (e.g., squeeze more into the page limits by not following formatting requirements).
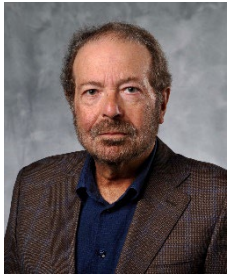
## Grants and Scholarships for Students

There are numerous funding opportunities specifically for SIOP student members.

- Need some financial support for your thesis or dissertation research? The **SIOP Graduate Student Scholarships** (including the **Lee Hakel Graduate Student Scholarship** and the **Mary L. Tenopyr Graduate Student Scholarship**) recognize achievement in a graduate career and are intended to assist doctoral students with the cost of carrying out their dissertation work. If you plan to pursue thesis or dissertation research on reducing gender equity or on leadership and teams, then be sure to take a good look at the $3,000 grants available from the **Hebl Grant for Reducing Inequities in the Workplace** and the **Graen Grant for Student Research on Leaders and/or Teams**.
- Do you qualify to apply for a fellowship or scholarship? The **Leslie W. Joyce and Paul Thayer Graduate Fellowship** provides $15,000 each to two doctoral student who (a) are specializing in talent management and (b) are committed to a practitioner career. The **George C. Thornton, III Graduate Scholarship** supports a doctoral student who epitomizes the scientist–practitioner model. The **Irwin L. Goldstein & Benjamin Schneider Graduate Scholarships by the Macey Fund** support a minority doctoral student in I-O psychology with a strong track record.
- Applying for the scholarships and fellowship requires putting together quite a bit of materials, so be sure to start early.
- Graduate faculty play a key role in supporting student applications for grants and scholarships. Do you have a process in place for deciding who to nominate if more than one of your program's students wants to apply for a SIOP Graduate Scholarship? Are you available in the April to June timeframe to write letters of support for scholarship applicants and letters of endorsement for those applying for grants?

Be on the lookout for an announcement about the award nomination system opening in early April. But don't wait until then to start imagining the possibilities!

# Howard M. Weiss

Howard Weiss, passed away at age 73 on February 20, 2023. Howard, a native Manhattanite, completed his undergraduate studies at George Washington University, where he met Jeanne DiLeo to whom he was married for 51 years. In 1975, Howard completed his PhD in New York University's I-O Psychology Program under the guidance of Ray Katzell.

Upon graduation, Howard joined the I-O faculty in the Department of Psychological Sciences at Purdue University where he continued his impactful work on social learning in organizations. He was a valued colleague to many and an inspiring mentor and teacher to generations of graduate students. After more than 3 decades at Purdue, including service as head of Psychological Sciences, Howard moved in 2012 to serve as chair of the School of Psychology at Georgia Institute of Technology

In a career spanning nearly 50 years, Howard's inclusive approach to the full spectrum of psychology led him to repeatedly introduce new research frameworks to the field of I-O psychology that continue to endure. His early work on learning led him to produce a widely read chapter on learning theory for the second edition of the *Handbook of I-O Psychology*. The work drew from both classical and modern learning perspectives and spelled out research and practice implications for I-O psychology. During the 1980s, Howard was significantly influenced by the personality–situation debate raging in social psychology. Howard forcefully argued for the value of taking a fresh look at personality, anticipating and, perhaps in part, stimulating the dramatic turn-around of I-O interest in personality that began in earnest during the 1990s. In the 1990s, Howard and Russ Cropanzano published affective events theory, a framework that sharply refocused I-O on the role of emotions in work life. Howard helped pioneer methods for capturing and analyzing real-time sampling of affective states over meaningful periods of time. Howard also articulated a more theoretically sound understanding of job satisfaction that reflected the development of the attitude construct in social psychology. During the 2000s, Howard became an advocate for a person-centered approach to understanding the experience of working. Drawing heavily on work by philosophers and anthropologists, he made a compelling, prescient case for I-O to develop a deeper understanding of the experience of working as construed by workers themselves.

Howard was also an active SIOPian. He was a SIOP Fellow, a founding member of the Society for Organizational Behavior, a SIOP representative to APA and APS, and member of numerous SIOP committees. He served on the editorial boards of virtually every leading journal in our field and mentored numerous students who became academic and practitioner leaders in our field.

Howard's construal of his role as a psychological scholar who engaged in creative and deep thinking led him to have impact in multiple areas of I-O psychology. At the same time, he was an extraordinarily considerate, kind, and caring person, a loving husband, father, and friend. His quick wit, easy way with people, and inviting smile will be sorely missed.

Seymour Adler and Ruth Kanfer

**Members in the Media**

**Amber Stark**
**Marketing and Communications Manage**

Awareness of I-O psychology has been on the rise thanks to articles written by and/or featuring our SIOP members. These are member media mentions found from Dec. 9, 2022, through March 5, 2023. We share them on our social media and in this column, which you can use to find potential collaborators, spark ideas for research, and keep up with your fellow I-O colleagues.

We scan the media on a regular basis, but sometimes articles fall through our net. If we've missed your or a colleague's media mention, please email them to astark@siop.org.

**Well-Being and Burnout**

**Michael Leiter** on burnout: https://lithub.com/the-battle-between-elon-musk-and-twitter-workers-is-part-of-a-bigger-war-about-burnout/

**Laura Pendergrass** on the critical yet undervalued part of the wellness equation: https://www.msn.com/en-us/money/other/3-morning-habits-to-help-you-be-happier-and-more-productive-at-work-according-to-psychologists/ar-AA15q2Fl

**Melissa Doman** on workplace mental health in 2023: https://www.reworked.co/employee-experience/a-new-approach-to-workplace-mental-health-in-2023/

**Ben Dattner** on psychological safety and psychological contracts: https://www.businessinsider.com/google-layoffs-employees-are-questioning-psychological-safety-2023-1

**Tracy Brower** on the impact managers have on mental health and how to lead for well-being: https://www.forbes.com/sites/tracybrower/2023/01/29/managers-have-major-impact-on-mental-health-how-to-lead-for-wellbeing/?sh=6cc83c1a2ec1

**Ellen Ernst Kossek** and **Chang-qin Lu** on the value of right-to-disconnect regulations: https://ssir.org/articles/entry/the_right_to_disconnect#

**Gordon Sayre** and **Mindy Shoss** on the impact the gig economy could be having on workers' health: https://consumer.healthday.com/mental-health-and-work-2658839102.html

Laura Pendergrass on how slowing down at work can help you get more done: https://www.nbcmiami.com/news/business/money-report/rest-is-productive-how-slowing-down-at-work-can-help-you-get-more-done/2944624/

**Inclusive Practices**

**Liu-Qin Yang** and **David Baldridge** on how supervisors can create a better work environment for deaf or hard-of-hearing employees: https://www.sciencedaily.com/releases/2023/01/230113112736.htm

**Ludmila Praslova** on how young neurodivergent professionals can succeed at work: https://www.fastcompany.com/90831228/early-career-neurodivergent-professionals-succeed-work?partner=rss&utm_source=rss&utm_medium=feed&utm_campaign=rss+fastcompany&utm_content=rss

**Ann Marie Ryan** part of a research team that developed voice-activated AI accessible to people who stutter: https://society-mag.com/people/research-team-develops-voice-activated-ai-accessible-to-people-who-stutter/

**Future of Work**

**Anthony Nyberg** on quiet hiring and quiet quitting: https://www.yahoo.com/now/quiet-hiring-opposite-quiet-quitting-174958836.html

**Denise Rousseau**, **Jennifer Nahrgang**, and **Joe Allen** on rebranding RTO: https://www.spokesman.com/stories/2023/jan/19/rebranding-rto-why-companies-coin-names-for-their-/

**Wayne Cascio** on the potential for layoffs to spread: https://www.businessinsider.com/us-economy-layoff-job-market-economists-recession-inflation-worried-2023-2

**Misc.**

**Carrie Ott-Holland** and **Mengyang Cao** on how to motivate a top performer when you can't promote them: https://hbr.org/2023/01/how-to-motivate-a-top-performer-when-you-cant-promote-them

**Tara Behrend** on the growing interest in industrial-organizational psychology: https://fortune.com/education/articles/a-fast-growing-segment-of-psychology-is-landing-grads-jobs-in-corporate-america/

**Megan Leasher** with four ways your leadership and your leadership brand are more important than ever when leaving a job without another one lined up: https://www.forbes.com/sites/forbeshumanresourcescouncil/2022/12/22/how-to-disrupt-the-journey-not-your-leadership/?sh=4410365f232f

**Ronald Riggio** on what makes a job great: https://www.psychologytoday.com/intl/blog/cutting-edge-leadership/202212/what-makes-a-job-great

**Shonna Waters** on the ability to delay gratification: https://www.forbes.com/sites/amirhusain/2022/12/29/looking-for-a-new-years-resolution-start-thinking-long-term/?sh=7da137b37b89

**Mike Baer** with ways we can give better feedback to a friend or colleague who comes to us with complaints: https://hiddenbrain.org/podcast/how-to-complain-productively/

**Eden King** on the idea of workplace-as-family: https://www.businessinsider.com/layoffs-google-microsoft-salesforce-tech-industry-employees-work-family-lesson-2023-1

**Steve Rogelberg** on effective meetings: https://news.wgcu.org/2023-02-15/shopify-deleted-322-000-hours-of-meetings-should-the-rest-of-us-be-jealous

# Membership Milestones

## Jayne Tegge, Volunteer and Member Services Manager

Please welcome the following new professional members!

| | | |
|---|---|---|
| Amy Aadland | Tomer Gottlieb | Adyl Nashef |
| Courtney Baker | Candida Greco | Lisa Nickell |
| Werner Barkhuizen | Jie Guo | Robert Olds |
| Jorge Barraza | Izz Aldin Hamdan | Rachel Omansky |
| Lynn Beer | Palina Hariton | Akshaya Parthasarathi |
| Amber Benusa | Ryan Horn | Fiona Patterson |
| David Binder | Carole Ingram | Sarah Paulson |
| David Bischof | Chetna Jaiswal | Megan Paxton |
| Michael Bixter | Remy Jennings | Alyssa Perez |
| Meha Bola | Jessica Johnston-Fisher | Lucius Pham |
| Lisa Brady | Shannon Kelly | Rachael Phillips |
| Reed Bramble | Ashley Kittel | Lisa Plant |
| Amy Bray | Nathaniel Klimek | Shannon Rawski |
| Hendrik Bronkhorst | Stella Korosi | Lynne Richer |
| Amy Brown | Dominique Kost | Joel Rodríguez-Polo |
| Dorian Campbell | Dianna Krueger | Michael Rotch |
| Jenna Carey | Stacey Levine | Mitja Ruzojcic |
| Samantha Church | Yuliana Lopez | Iain Smith |
| Brian Cicero | Gabriela Lopez | Junhong Song |
| Lydia Craig | Ashlyn Lowe | William Spring |
| Kyle Emich | Natalya Martinez | Cassandra Stiltz |
| Britta Eriksen | Michelle McCartney | Anastasia Stuart-Edwards |
| Jose Espinoza | Jordan McDonald | Manasia Sturdivant |
| Jenny Fawbush | Steven Mellor | Erica Sutherland |
| Tara Floyd | Cyrus Mirza | Andrea Thompson |
| Leah Frazier | Vanessa Moore | Yilei Wang |
| Natalie French | Kenneth Murphy | Shelby Williams |
| Ariane Froidevaux | Sashna Nair | Durel Williams |
| | | Martina Young |

My SIOP membership is a game-changer for our career management practice, offering access to a deep arsenal of tools and contacts in support of our mission to build and mobilize evidence-based programs that inspire candidates to thrive in the world of work.

### Margi Williams

Sterling Circle members are easy to find at the conference. Just look for the purple and silver ribbons. We welcome these new members to the 25 years of SIOP club!

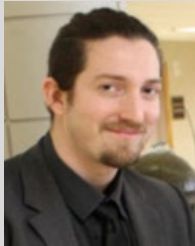Annie Adams    Lynn Collins    Simon Moon    Mary Ann Hanson

**SIOP is the best way to stay connected to the I-O community, no matter where you go after your degree. I'll probably always be a member!**

**Katye Griswold**

And a round of applause for these individuals who upgraded to full membership from Associate status.

| | | | |
|---|---|---|---|
| Tonya Baker | Bethany Dohleman | Jami Firek | Noelle Frantz |
| Sachin Jain | Stephen King | Nchopia Nwokoma | |



**I cannot thank you enough for helping me connect with other SIOP members. I appreciate the emails and find them a helpful resource pushing me towards inspiring topics of interest.**

**I am thrilled that through SIOP I have met a couple of exceptional practitioners who are invitingly unpretentious. Learning about connecting within the field and navigation tips for my career is the best thing about my student membership. I can see this improving as my education and career advances.**

**Dante Saelios**